Lesson-6: Animals – Reproduction

11 Periods (40 minutes each)

Learn Better (Main Course Book), Stay Ahead (Workbook), Book of Holistic Teaching, Book of Project Ideas, Posters, CRM signs

Animation, Animated Activities, Concept Map, Diagram, Dictionary, eBook, I Explain, Quiz, Slideshow, Test Generator

Affirming better: I am becoming a better person.

Curricular Goals and Objectives (NCF)

To enable the students:

- to understand how living beings reproduce and how animals care for their young ones.
- to identify and illustrate the life cycle stages of different animals and recognise patterns in nature.
- to apply scientific knowledge to daily life, health, and well-being.
- to express creativity through writing, composing, and describing scientific observations.
- to engage in hands-on projects and discussions to develop curiosity and scientific thinking.

Methodology

Period 1

SHOULD DO — 5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Before we dive into our lesson, let us take a moment to relax and focus our minds with a short meditation.

Teacher: Sit comfortably in your chair, with your back straight and feet flat on the ground. Close your eyes gently and take a deep breath through your nose. Hold it for a moment, then slowly breathe out through your mouth.

Let us do these three more times. Breathe in... and breathe out. As you breathe, imagine your mind becoming clear and ready to learn.

Open your eyes and smile at your friends. Let us start our lesson with positive energy.

Affirming better

MUST DO — 5 MIN.

Teacher: Before we start the class, let us all affirm together, 'I am becoming a better person.' Repeat after me: 'I am becoming a better person.'

Teacher: Alright. Today, we are going to begin a new chapter 'Animals - Reproduction.' We use a KWL chart to help us organize our thoughts and learning. I have made a KWL format on the blackboard. Please take out your notebooks and draw the same format.

Teacher: Let us start by filling out the 'K' and 'L' columns. Take a few minutes to think and write. If you have any questions, feel free to ask.

K	W	L

Teacher: Before we start the chapter, we will do a quick Re-KAP, which involves revisiting our previous knowledge through creative activities using Kinaesthetic, Auditory and Pictorial methods to make our learning interactive and engaging.

Kinaesthetic

MUST DO — 10 MIN.

Teacher: Let us start a Kinaesthetic activity. What is your favourite animal? Think about it for a moment.

Teacher: Now, take your drawing materials and draw and colour the face of your favourite animal. Once done, you will create a stick puppet of that animal. When you are ready, you will talk about your animal and its family to your partner.

(Give time to the students to perform the activity.)

Kinaesthetic

What is your favourite animal? Draw and colour the face. Make a stick puppet of your favourite animal. Talk about the animal and its family with your partner. 39

Teacher: Fantastic work, everyone.

Auditory

MUST DO — 10 MIN.

Teacher: Now, let us move to the Auditory section. Listen carefully. I will

ask some questions and you will answer them. Pay close attention because you will need to think before you respond.

All around us, we see animals of different sizes. Big animals like cows and dogs can live with people and are called domestic animals. Small creatures, like butterflies and insects such as cockroaches, are often seen in our gardens or homes. Each of them plays an important role in nature.

1. What are some examples of big domestic animals?
2. Where do we often see butterflies and cockroaches?

(Wait for students to answer)

Teacher: Great listening. Keep it up.

Auditory*

Listen to your teacher carefully. Answer the questions. 39

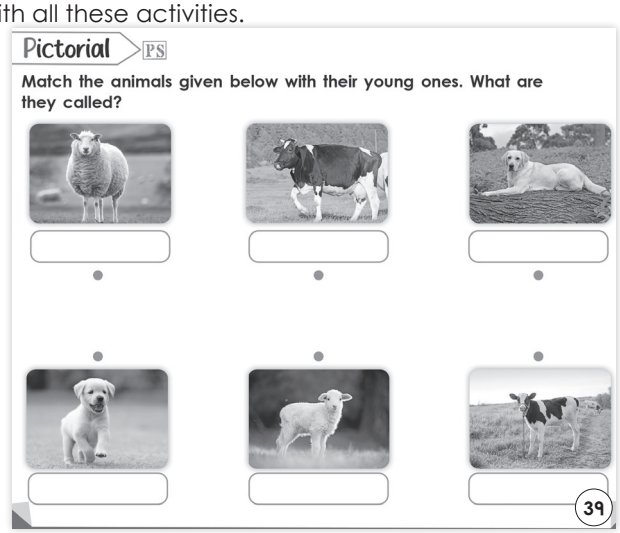
Pictorial

Teacher: Excellent. Now, we have a pictorial activity. Look at the pictures on page 39 of your Main Course Book. There are some adult animals and their young ones. Your task is to match them correctly. Once you match them, write down what their young ones are called.

MUST DO 10 MIN.

(Wait for students to complete the activity and discuss the correct answers.)

Teacher: Great work, everyone. You did a fantastic job with all these activities.



Differentiated Activities

110 km/hr

Name two animals that live with people and are called domestic animals.

80 km/hr

Where do we often see small creatures like butterflies and cockroaches?

40 km/hr

What is the young one of a cow called?

Home Task

Create a collage using pictures of different domestic animals. Cut out pictures from old magazines. Paste them on a chart paper and label them correctly. Write one interesting fact about each of the animals you included.

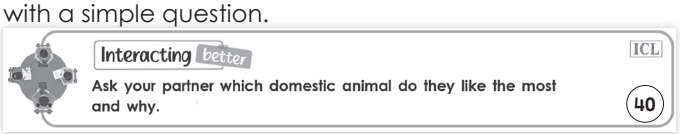
Period 2

Interacting better

MUST DO 10 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Today, we will discuss domestic animals, especially how they care for their young ones. Let us start with a simple question.



Teacher: What is your favourite domestic animal and why? Think about it for a moment. Now, ask your partner the same question and listen carefully to their response.

(Give time for students to interact.)

(Use CRM signs to settle the class.)

Teacher: Wonderful. Everyone has interesting choices. Now, let us explore more about how animals care for their young.

Teacher: Look at the pictures on page 40 of your Main Course Book. Maria and her mother saw a dog with her puppies. I want you to read the animated story. Once you have finished reading, I will talk about what you learned. Ready? Go ahead and read the story.

(Give time to the students to read the story)

Teacher: Now that you have read the story, let us discuss a few questions to check your understanding.

MUST DO 30 MIN.

Teacher: Maria was walking with her mother when she noticed something about the mother dog and her puppies. What did she see?

Teacher: The mother dog was always close to her puppies. Can you tell me why she stayed near them?

Teacher: Maria was curious to know if dogs had always behaved this way. Her mother explained something about wolves. What did she say?

Teacher: Yes. The dogs evolved from wolves. Can you explain how they are connected?

Teacher: Maria found it fascinating that animals have a natural way of caring for their young ones. What part of this surprised her the most?

Teacher: Excellent responses. You have understood the story well.

You may show the **Dictionary** and **eBook** given on the digital platform.

Differentiated Activities

110 km/hr

Why do mother dogs stay close to their puppies?

80 km/hr

Which ancestor of dogs had strong family bonds?

40 km/hr

What is the young one of a dog called?

Home Task

Draw a picture of a domestic animal with its young one. Colour it and write one sentence about how the mother cares for her baby. Bring it to class for display.

Period 3

SHOULD DO 5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Before we begin today's lesson, let us play a quick warm-up game based on what we have learned in the last two periods. I will describe an animal and you have to guess which one I am talking about. Listen carefully.

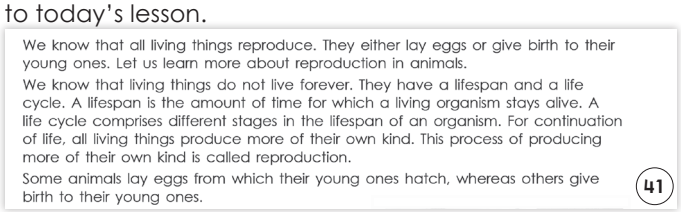
Teacher: I am a domestic animal with four legs and a wagging tail. People call me loyal and I always stay close to my puppies. Who am I? (Dog)

Teacher: I am the wild ancestor of dogs. I live in packs and take care of my young ones just like dogs do. Who am I? (Wolf)

Teacher: I am a small creature with colourful wings. I fly around flowers in gardens. Who am I? (Butterfly)

Teacher: I am a large domestic animal kept on farms for milk. My young one is called a calf. Who am I? (Cow)

Teacher: Well done, everyone. You remembered everything from the last two periods. Now, let us move on to today's lesson.



We know that all living things reproduce. They either lay eggs or give birth to their young ones. Let us learn more about reproduction in animals.

We know that living things do not live forever. They have a lifespan and a life cycle. A lifespan is the amount of time for which a living organism stays alive. A life cycle comprises different stages in the lifespan of an organism. For continuation of life, all living things produce more of their own kind. This process of producing more of their own kind is called reproduction.

Some animals lay eggs from which their young ones hatch, whereas others give birth to their young ones.

41

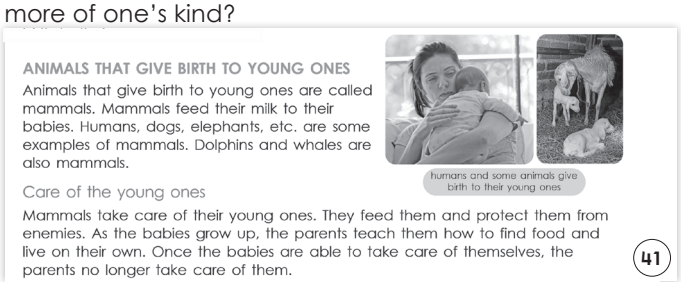
Teacher: Today, we will explore how animals reproduce and take care of their young ones.

(The teacher will read the first three paragraphs of page 41 aloud and provide explanations to ensure that the students understand the content.)

MUST DO 20 MIN.

Teacher: Let us begin with a simple question. Do all living things live forever? Think carefully before you answer.

Teacher: That is right. Every living thing has a lifespan, which means it lives for a certain time and then its life comes to an end. But life continues because living things reproduce. What do we call the process of producing more of one's kind?



ANIMALS THAT GIVE BIRTH TO YOUNG ONES

Animals that give birth to young ones are called mammals. Mammals feed their milk to their babies. Humans, dogs, elephants, etc. are some examples of mammals. Dolphins and whales are also mammals.

humans and some animals give birth to their young ones

Care of the young ones

Mammals take care of their young ones. They feed them and protect them from enemies. As the babies grow up, the parents teach them how to find food and live on their own. Once the babies are able to take care of themselves, the parents no longer take care of them.

41

Teacher: Excellent. Reproduction is the process by which animals and plants produce their young ones. Now, can you tell me the two ways in which animals reproduce?

Teacher: Correct. Some animals lay eggs and their babies hatch from them. Others give birth to their young ones directly.

Teacher: Let us talk about animals that give birth to their young ones. Can anyone tell me what we call animals that give birth to their young ones?

MUST DO 15 MIN.

Teacher: Yes. These animals are called mammals.

Teacher: Mammals feed their babies with their own milk. Can you name some mammals?

Teacher: Yes, humans, dogs and elephants are mammals.

Teacher: Well done. Humans, dogs, elephants and even dolphins and whales are mammals. Though dolphins and whales live in water, they do not lay eggs but give birth to live young ones.

Teacher: Now, let us think about what happens after the babies are born. Do their parents just leave them on their own?

Teacher: No, mammals take care of their young ones. How do they do this?

Teacher: That is correct. Mammals protect their babies and feed them. But as the babies grow, the parents teach

them important survival skills. Can you think of something a mother animal might teach her baby?

Teacher: Great responses. Once the babies learn to find food and take care of themselves, the parents stop taking care of them. Let us now do an activity to check what we have learned.

Use the **I Explain** given on the digital platform to reinforce the learning.

Differentiated Activities

110 km/hr

Name one mammal that lives in water but does not lay eggs.

80 km/hr

What do we call animals that give birth to young ones and feed them milk?

40 km/hr

Name one animal that gives birth to its young one.

Home Task

Draw and colour a picture of a mammal with its baby. Write five sentences about how the mother takes care of her young one. Bring it to class for display.

Period 4

SHOULD DO — 5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Before we begin today's lesson, let us play a fun riddle game to recall what we have learned so far. I will give you a short riddle and you have to guess the correct answer. Are you ready?

Teacher: I do not lay eggs, but I feed my babies milk. You can find me in the jungle, on a farm or even at home. Who am I? (Mammal)

Teacher: I am a mammal, but I live in the ocean. I do not lay eggs and I love to swim. Who am I? (Dolphin/Whale)

Teacher: I come from an egg and when I grow up, I have wings to fly. You can often see me in gardens. Who am I? (Butterfly)

Teacher: I have a lifespan, which means I do not live forever. But I make sure my kind continues by giving birth or laying eggs. What am I? (Living thing)

Teacher: I take care of my babies when they are small, feeding and protecting them. But once they can find food on their own, I stop taking care of them. Who am I? (Mother Mammal)

Teacher: Fantastic answers. You have remembered everything we have learned so far. Now, let us begin today's lesson.

Teacher: We have been learning about how animals reproduce. Today, let us explore a different way in which animals bring their young ones into the world.

MUST DO — 15 MIN.

(The teacher will read the second last paragraphs of page 41 aloud and provide explanations to ensure that the students understand the content.)


ANIMALS THAT LAY EGGS

Animals, such as birds, snakes and frogs, lay eggs to reproduce.

Birds

Birds lay eggs to reproduce. Most of the birds build nests to lay their eggs. After laying eggs, they sit on them to keep the eggs warm. After a few days, the eggs hatch and baby birds come out of the eggs.

parents take care of their young ones.

egg
embryo
hatchling
chick
adult

life cycle of a bird

41

Teacher: Some animals do not give birth to their babies directly. Instead, they lay eggs. Can you name a few animals that lay eggs?

Teacher: That is right. Birds, snakes and frogs lay eggs. Let us learn more about how birds take care of their eggs.

Teacher: Birds lay eggs to reproduce. But do they simply lay eggs and leave them? What do you think birds do after laying eggs?

Teacher: Yes, most birds build nests to lay their eggs in a safe place. Once they lay eggs, they sit on them to keep them warm. Why do you think birds keep their eggs warm?

Teacher: That is correct. The warmth helps the baby bird grow inside the egg. After a few days, the eggs hatch and baby birds come out.

Poster

MUST DO — 10 MIN.

Teacher: Let us take a moment to look at the poster on the wall.

(Display and discuss the posters prominently in the classroom to reinforce the learning about animal reproduction. Encourage students to observe the posters and discuss the different types of animal reproduction.)

Teacher: Great observation everyone.

Understanding Better

MUST DO — 10 MIN.

Teacher: Now, let us do the understanding better activity given on page 41 of your Main Course Book. I will read out two statements and I want you to tell me if they are true or false. Ready?

Teacher: First statement: A life cycle is the amount of time a living organism stays alive. Is this true or false?

(Discuss and explain the correct answer with the class.)

Teacher: Second statement: Dolphins are mammals. Is this true or false?

(Discuss and explain the correct answer with the class.)

Teacher: Great job, everyone. You are doing well in understanding how animals reproduce.

Understanding better

Say true or false.

1. A life cycle is the amount of time a living organism stays alive.
2. Dolphins are mammals.

41

Differentiated Activities

110 km/hr

How do birds make sure their eggs stay warm and safe for baby birds to grow?

80 km/hr

What do birds do after laying their eggs?

40 km/hr

Name one animal that lays eggs.

Home Task

Draw and colour the life cycle of a bird, starting from the egg to the adult bird. Label each stage and bring it to class for display.

Period 5

SHOULD DO — 5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Good morning, everyone. Before we begin today's lesson, let us play a quick guessing game based on what we have learned so far. I will describe an animal and you have to guess if it lays eggs or gives birth to live young ones. Let us begin.

Teacher: I live in water, I have smooth skin and I can jump very high. My babies hatch from eggs and later grow legs to hop. Who am I? (Frog – Lays Eggs)

Teacher: I have fur, I feed my babies with milk and I live on land. I give birth to my young ones. Who am I? (Dog – Gives Birth)

Teacher: I build a nest to keep my eggs safe. I sit on them to keep them warm until my babies hatch. Who am I? (Bird – Lays Eggs)

Teacher: I live in the sea, but I do not lay eggs. Instead, I give birth to my babies and feed them milk. Who am I? (Dolphin – Gives Birth)

Teacher: I slither on the ground and my babies hatch from eggs. Some of my kind are poisonous. Who am I? (Snake – Lays Eggs)

Teacher: Well done. You remembered everything we learned about animals that lay eggs and those that give birth. Now, let us begin today's lesson.

Teacher: Today, we will learn about each part of the egg and its importance.

(The teacher will read the last paragraph of page 41 and the first paragraph of page 42 aloud and provide explanations to ensure that the students understand the content.)

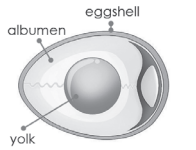
MUST DO — 10 MIN.

Teacher: Before we begin, let me ask you something. Have you ever cracked an egg before? What did you notice inside?

Structure of a bird's egg

41-42

An egg has a thin but hard outer shell called the eggshell. The eggshell protects the inner parts of the egg. Inside the eggshell, albumen is present. The albumen is a jelly-like white substance and rich in proteins. Inside the albumen lies the yellow-coloured yolk. The yolk is rich in fats, minerals and vitamins. The yolk provides food for the baby growing inside the egg.



internal structure of an egg

The growing baby inside an egg is called the embryo. The embryo goes through different stages of development inside the egg before hatching. The baby that comes out of the egg after hatching is called hatchling or chick.

Teacher: That is right. You saw a hard outer shell, a jelly-like white part and a yellow part in the centre.

Teacher: Now, tell me what is the thin but hard outer covering of an egg called?

Teacher: Correct. This is called the eggshell. What do you think the eggshell does?

Teacher: Yes, it protects the inside of the egg.

Teacher: But what do we find inside the shell? There is a jelly-like white part called albumen. Can you guess why albumen is important?

Teacher: Well done. The albumen is rich in proteins and helps the baby bird grow.

Teacher: Now, let us move to the yellow part in the centre of the egg. What is it called?

MUST DO — 15 MIN.

Teacher: Correct. It is called the yolk. The yolk is rich in fats, minerals and vitamins. Why do you think the yolk is important?

Teacher: Absolutely right. The yolk provides food for the growing baby inside the egg. Now, let me ask you something. What is the baby growing inside an egg called?

Teacher: Excellent. The growing baby inside an egg is called an embryo. The embryo slowly develops inside the egg until it is ready to hatch. What do we call the baby bird that comes out of the egg?

Teacher: That is right. It is called a hatchling or a chick. Now, let us do an activity to check what we have learned.

Use the **Diagram** given on the digital platform to reinforce the learning.

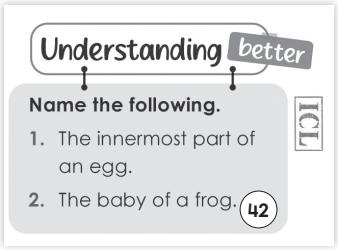
Teacher: Now, let us do the understanding better activity given on page 42 of your Main Course Book. I will ask two

questions and I want you to tell me the correct answer. Ready?

MUST DO 10 MIN.

Teacher: First question: Name the innermost part of an egg.

(Discuss and explain the correct answer with the class.)



Teacher: Second question: Name the baby of a frog.

(Discuss and explain the correct answer with the class.)

Teacher: Great job, everyone.

Differentiated Activities

110 km/hr

What is the function of the yolk inside an egg?

80 km/hr

What do we call the growing baby inside an egg?

40 km/hr

What is the outer covering of an egg called?

Home Task

Draw and colour a diagram of an egg showing all its parts. Label each part and write one sentence about its function. Bring it to class for display.

Period 6

SHOULD DO 5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Good morning, everyone. Before we begin today's lesson, let us play a quick game to recall what we have learned so far. I will give you a statement with a missing word and you have to guess the correct word to complete it. Let us begin.

Teacher: The hard outer shell of an egg that protects the inside is called the _____. (Eggshell)

Teacher: The white jelly-like part inside the egg, rich in proteins, is called _____. (Albumen)

Teacher: The yellow part of the egg that provides food for the growing baby is called the _____. (Yolk)

Teacher: The baby bird developing inside the egg is called the _____. (Embryo)

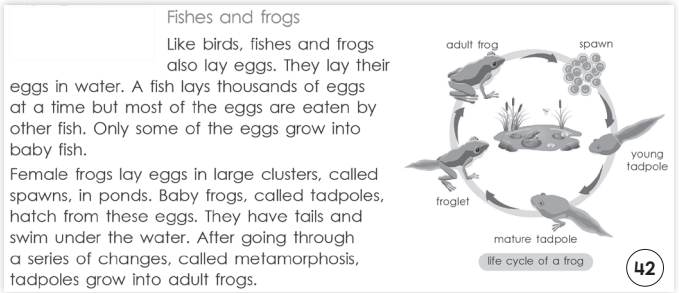
Teacher: The baby bird that hatches from the egg is called a _____. (Hatchling/Chick)

Teacher: Birds sit on their eggs to keep them _____ so the embryo can grow. (Warm)

Teacher: Excellent answers, everyone. You have remembered all the key points about eggs and how baby birds develop. Now, let us begin today's lesson.

Teacher: Today, we will learn about the life cycles of different animals that lay eggs.

(The teacher will read the second to fifth paragraph of page 42 aloud and provide explanations to ensure that the students understand the content.)



Teacher: We have already discussed birds, but can you think of other animals that also lay eggs?

Teacher: That is right. Fishes, frogs, butterflies and even insects like cockroaches lay eggs. But do you think all these animals grow the same way?

MUST DO 15 MIN.

Teacher: No, they all have different life cycles. Let us explore how each of them grows from an egg into an adult.

Teacher: Let us start with fishes and frogs. Fishes lay their eggs in water. A fish lays thousands of eggs at once, but do you think all the eggs hatch into baby fish?

Teacher: No, most of the eggs are eaten by other fish. Only a few survive and grow into baby fish. Now, let us talk about frogs. Where do frogs lay their eggs?

Teacher: Correct. Female frogs lay eggs in ponds in large clusters called spawns. The baby frogs that hatch from these eggs are called tadpoles. Can you describe what a tadpole looks like?

Teacher: Yes. Tadpoles have tails and can swim under the water. But do they stay like this forever?

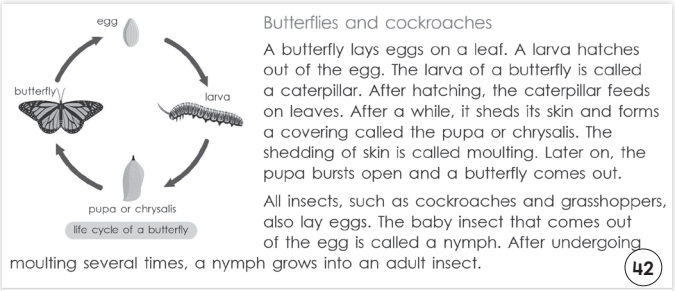
Teacher: No, they go through many changes. This process is called metamorphosis. What happens to a tadpole as it grows?

Teacher: That is right. It grows legs, loses its tail and becomes an adult frog.

MUST DO 10 MIN.

Use the **Animation** given on the digital platform to reinforce the learning.

Teacher: Now, let us talk about another animal that lays eggs—the butterfly. A butterfly lays eggs on a leaf. When the eggs hatch, a larva comes out. Do you know what the larva of a butterfly is called?



Butterflies and cockroaches

A butterfly lays eggs on a leaf. A larva hatches out of the egg. The larva of a butterfly is called a caterpillar. After hatching, the caterpillar feeds on leaves. After a while, it sheds its skin and forms a covering called the pupa or chrysalis. The shedding of skin is called moulting. Later on, the pupa bursts open and a butterfly comes out.

All insects, such as cockroaches and grasshoppers, also lay eggs. The baby insect that comes out of the egg is called a nymph. After undergoing moulting several times, a nymph grows into an adult insect.

42

Teacher: Yes. It is called a caterpillar. The caterpillar eats leaves and grows. But does it remain a caterpillar forever?

MUST DO
15 MIN.

Teacher: No, after some time, it sheds its skin and forms a hard covering around itself. This is called the pupa or chrysalis. The process of shedding skin is called moulting. After some time, the pupa bursts open and a butterfly comes out.

Teacher: Now, what about insects like cockroaches and grasshoppers? Do they also lay eggs?

Teacher: Yes. The baby insect that hatches from the egg is called a nymph. It looks like a smaller version of the adult insect. As it grows, it moults several times before becoming an adult.

Teacher: Now, let us do an activity to check what we have learned.

You may show the **Animated Activities** on the digital platform.

Differentiated Activities

110 km/hr

What is the process called when a tadpole transforms into a frog?

80 km/hr

What is the larva of a butterfly called?

40 km/hr

Name one insect that lays eggs.

Home Task

Draw and colour the life cycle of a frog or a butterfly. Label each stage and write one sentence about it. Bring it to class for display.

Period 7

SHOULD DO
5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Before we begin today's lesson, let us play a quick matching game to recall what we have learned so far. I will ask a question and you have to answer in just one word. Let us begin.

Teacher: What protects the inside of an egg? (Eggshell)

Teacher: What is the white part inside an egg called? (Albumen)

Teacher: Which part of the egg provides food to the growing baby? (Yolk)

Teacher: What is the baby frog that hatches from an egg called? (Tadpole)

Teacher: What is the process of transformation in frogs and butterflies called? (Metamorphosis)

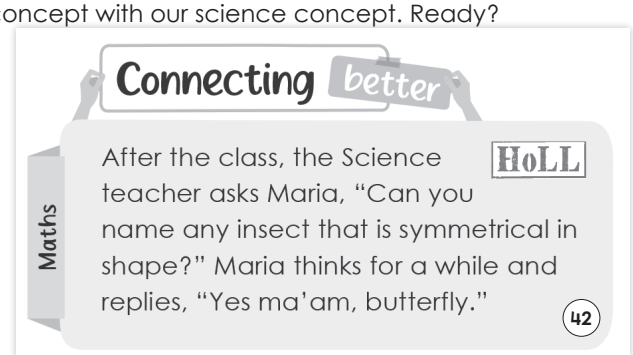
Teacher: Wonderful answers. You remembered all the key concepts. Now, let us begin today's lesson.

Teacher: Today, we will explore different activities that connect science with our daily lives. These activities will help us understand how nature and living beings are connected.

Connecting Better

Teacher: Let us begin with our first activity, called Connecting Better. Here we will connect a maths concept with our science concept. Ready?

MUST DO
10 MIN.



Teacher: In Science, we have learned about different shapes in nature. Some shapes are symmetrical, meaning if you divide them into two equal halves, both sides look the same. Can you think of any examples of symmetrical shapes in nature?

Teacher: After a Science class, Maria's teacher asked her, 'Can you name any insect that is symmetrical in shape?' Maria thought for a moment and replied, 'Yes ma'am, butterfly.'

Teacher: That is correct. A butterfly is symmetrical because if you fold its wings along the middle, both sides match perfectly. Can you think of any other insects that have symmetrical shapes like butterflies? Look closely at their wings and body structure before answering.

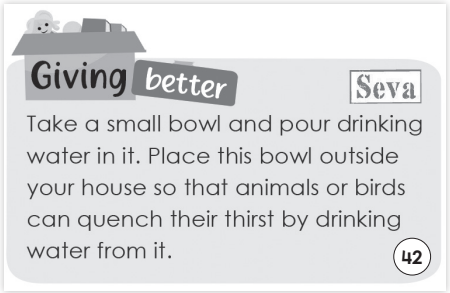
Giving better

Teacher: Now, let us move to the next activity called 'Giving better.' Let us talk about a small act of kindness towards animals. During the summer or dry seasons, animals and birds often struggle to find water to drink. Can you think of a simple way to help them?

MUST DO
10 MIN.

Teacher: One way to help is by taking a small bowl and filling it with drinking water. If you place this bowl outside

your house, birds and small animals can come and drink from it whenever they are thirsty.



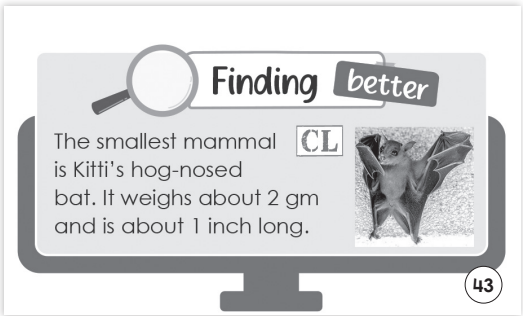
Teacher: Why do you think it is important to provide water for animals, especially in hot weather? Can you think of any other ways we can help them stay safe and comfortable?

Finding better

MUST DO
5 MIN.

Teacher: Great thinking everybody. Now, let us learn an interesting fact about the animal world. There are big mammals like elephants and lions, but did you know that there is also a tiny mammal that is the smallest in the world?

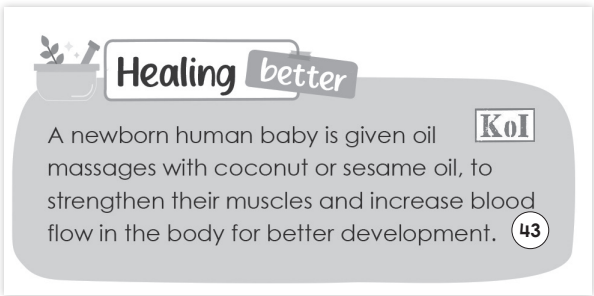
Teacher: The smallest mammal is called Kitti's hog-nosed bat. It weighs only about 2 grams and is about 1 inch long. Imagine how small that is.



Healing better

MUST DO
10 MIN.

Teacher: Now, let us talk about something we do to help babies grow stronger. When a newborn baby is born, parents and elders often massage the baby with oil. Have you ever seen this happening?



Teacher: Great. A newborn human baby is given oil massages with coconut or sesame oil. How do you think this oil massage helps the baby?

Teacher: Yes. These massages help to strengthen the baby's muscles and improve blood flow, which helps in healthy growth.

You may show the **Concept Map** on the digital platform.

Differentiated Activities

110 km/hr

Why is a butterfly considered symmetrical?

80 km/hr

What is the name of the smallest mammal in the world?

40 km/hr

What oil is commonly used to massage newborn babies?

Home Task

Observe any insect in your surroundings and draw a picture of it in your notebook. Write two sentences describing its features and how it moves. Bring your drawing to class for discussion.

Period 8

SHOULD DO
5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Before we begin today's lesson, let us play a quick matching game to recall what we have learned so far. I will ask a question and you have to answer in just one word. Let us begin.

Teacher: What is the stage before a butterfly becomes an adult? (Pupa)

Teacher: What is the young one of insects like cockroaches and grasshoppers called? (Nymph)

Teacher: What is the process of shedding skin in some insects called? (Moulting)

Teacher: What term describes a balanced shape, like that of a butterfly? (Symmetry)

Teacher: What is the activity of placing a bowl of water outside for animals to drink called? (Giving Better)

Teacher: Wonderful answers. You remembered all the key concepts. Now, let us begin today's lesson.

Recalling better

MUST DO
15 MIN.

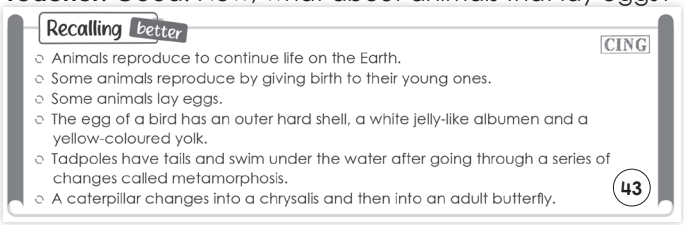
Teacher: Today, let us recall some important information about animal reproduction. Ready?

Teacher: Great. Why do animals reproduce? Think and tell me about the reason behind it.

Teacher: Yes, animals reproduce to continue life on Earth. If they did not reproduce, their species would not survive. Now, can you tell me the two main ways in which animals reproduce?

Teacher: That is right. Some animals give birth to their young ones, while others lay eggs. Can you name a few animals that give birth to their young ones?

Teacher: Good. Now, what about animals that lay eggs?



Recalling better

CING

- Animals reproduce to continue life on the Earth.
- Some animals reproduce by giving birth to their young ones.
- Some animals lay eggs.
- The egg of a bird has an outer hard shell, a white jelly-like albumen and a yellow-coloured yolk.
- Tadpoles have tails and swim under the water after going through a series of changes called metamorphosis.
- A caterpillar changes into a chrysalis and then into an adult butterfly.

43

Teacher: Great. Birds lay eggs to reproduce. But an egg is not just a simple shell. It has different parts inside. Can you describe what is inside a bird's egg?

Teacher: Yes. The outer covering of the egg is called the eggshell, which is hard and protects the inside. Inside, there is a jelly-like white substance, what is it called?

Teacher: Yes. It is called albumen. What is the yellow part in the middle called?

Teacher: Correct. The yellow part is the yolk, which provides food for the baby growing inside the egg.

Teacher: Now, let us talk about animals that change a lot as they grow. Do you remember what a baby frog is called when it hatches from the egg?

Teacher: Yes. It is called a tadpole. How does it look when it hatches?

Teacher: That is right. A tadpole has a tail and swims in water. But does it stay like this forever?

Teacher: No, it goes through a process called metamorphosis. Slowly, its tail disappears and it grows legs, turning into an adult frog.

Teacher: Another interesting example is the butterfly. A butterfly does not hatch from an egg looking like a butterfly. What is the first stage after the egg hatches?

Teacher: Yes. It is a caterpillar. But does the caterpillar immediately turn into a butterfly?

Teacher: No, first, it forms a covering around itself called a chrysalis or pupa. After some time, the pupa bursts open and an adult butterfly comes out.

Teacher: This change from one stage to another is also called metamorphosis. Can you now think of any other animals that go through similar changes?

Teacher: Wonderful. You have recalled everything very well. Now, let us move to today's lesson.

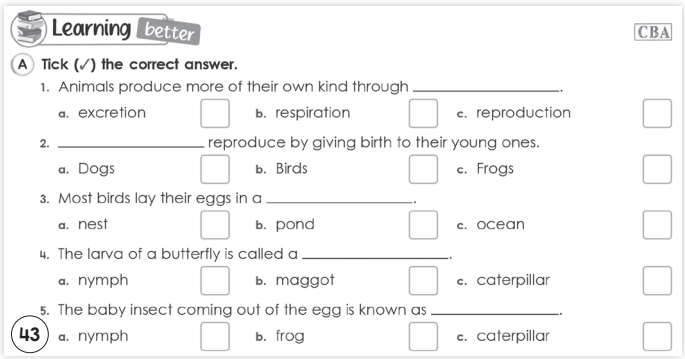
Learning Better

MUST DO

10 MIN.

Teacher: Everyone please open the page number 437 of your Main Course Book. We have an exercise called 'Learning Better.' In part 'A' of 'Learning better' you have to tick the correct answer. Are you ready to get started?

Teacher: Great. Let us begin with the first question. Animals produce more of their own kind through _____.



Learning better

CBA

A Tick (✓) the correct answer.

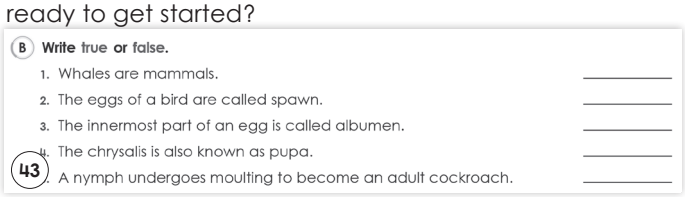
1. Animals produce more of their own kind through _____.
   a. excretion ☐ b. respiration ☐ c. reproduction ☐
2. _____ reproduce by giving birth to their young ones.
   a. Dogs ☐ b. Birds ☐ c. Frogs ☐
3. Most birds lay their eggs in a _____.
   a. nest ☐ b. pond ☐ c. ocean ☐
4. The larva of a butterfly is called a _____.
   a. nymph ☐ b. maggot ☐ c. caterpillar ☐
5. The baby insect coming out of the egg is known as _____.
   a. nymph ☐ b. frog ☐ c. caterpillar ☐

43

Teacher: The correct answer is reproduction. Well done.

(Similarly complete all five questions)

Teacher: Now let us start exercise 'B' of the 'Learning better' section, you have to write 'true' or 'false'. Are you ready to get started?



B Write true or false.

1. Whales are mammals. _____
2. The eggs of a bird are called spawn. _____
3. The innermost part of an egg is called albumen. _____
4. The chrysalis is also known as pupa. _____
5. A nymph undergoes moulting to become an adult cockroach. _____

43

Teacher: Great. Let us begin with the first question. Whales are mammals. Think carefully and write true or false in the space given in front of the statement.

(Similarly complete all five questions)

You may show the **Slideshow** on the digital platform.

Differentiated Activities

110 km/hr

What is the process called in which a tadpole changes into an adult frog?

80 km/hr

What is the white jelly-like part inside a bird's egg called?

40 km/hr

What is the baby frog that hatches from an egg called?

Home Task

Observe any egg-laying animal in your surroundings, such as a bird, insect or frog. Write three sentences about where it lays its eggs, how it protects them and what happens after the eggs hatch. Bring your observations to class for discussion.

Period 9

SHOULD DO

5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Good morning, everyone. Let us begin with a quick warm-up game to recall what we have learned so far. I will describe a stage in the life cycle of an animal and you have to guess which stage it is. Let us begin.

Teacher: I hatch from an egg and I have a long tail. I live in water and swim like a fish. As I grow, my tail gets smaller and I develop legs. Who am I? (Tadpole)

Teacher: I am the stage after an egg hatches in a butterfly's life cycle. I am long and crawl on leaves, eating them to grow bigger. Who am I? (Caterpillar/Larva)

Teacher: I am the hard covering around a butterfly before it emerges as an adult. I stay still until I am ready to come out. Who am I? (Chrysalis/Pupa)

Teacher: I protect the baby bird inside me with my hard shell. I contain albumen and yolk, which help the baby grow. What am I? (Egg)

Teacher: I am a process of complete transformation in animals like frogs and butterflies. My name means ' change in form.' What am I? (Metamorphosis)

Teacher: Fantastic answers. You remember all the important stages of animal life cycles. Now, let us move on to today's lesson.

Learning Better

MUST DO
10 MIN.

Teacher: Everyone please open the page number 44 of your Main Course Book. We have an exercise called 'Learning Better.' In part 'C' of 'Learning better' you have to write short answer in your notebook. Are you ready to get started?

C **Write short answers in your notebook.**
1. Define reproduction.
2. Why do most of the eggs have a hard covering on their outer surface?
3. Define moulting.

44

Teacher: Great. Let us begin with the first question. Define reproduction.

(Students have to write the answers for the given questions in about 40 to 50 words in their notebook. Wait for the students to write the answers.)

(Similarly complete all three questions)

Learning Better

MUST DO
10 MIN.

Teacher: Everyone please open page number 38 of your Main Course Book. We have an exercise called 'Learning Better.' In part 'D' of 'Learning better' you have to write some long answer questions. Are you ready to get started?

Teacher: Great. Let us begin with the first question. Explain the structure of an egg with the help of a diagram.

(Students have to write the answers for the given questions in about 100 to 150 words in their notebook. Wait for the students to write the answers.)

(Similarly, complete the second question)

D **Write long answers in your notebook.**
1. Explain the structure of an egg with the help of a diagram.
2. Explain the life cycle of a butterfly with the help of a diagram.

44

Worksheet-1

MUST DO
15 MIN.

Teacher: Let us do some activities from the workbook. Everybody, please open page number 25 of your workbook and answer the questions given in worksheet - 1.

(Let the students answer the questions on their own. Then discuss the answer by writing the correct answer on the blackboard.)

Theme 4: How Do We Evolve?

Worksheet 1

6. Animals – Reproduction

A. Fill in the blanks.

1. Living things do not live _____.
2. Living things have a _____ and a life cycle.
3. A _____ is the amount of time a living organism stays alive.
4. A _____ comprises of different stages in the lifespan of an organism.
5. The process of producing more of their own kind by living things is known as _____.

B. Write true or false.

1. Mammals feed milk to their young ones. _____
2. Birds do not give birth to the young ones. _____
3. Mammals protect their babies from their enemies. _____
4. All living things produce more of their own kind. _____
5. Some animals lay eggs while others give birth to their young ones. _____

C. Circle the correct answers.

1. (Frogs/Humans) feed milk to their babies.
2. (Birds/Whales) lay eggs to reproduce.
3. Most of the (birds/snakes) make nests to lay their eggs.
4. Animals that give birth to young ones are called (birds/mammals).
5. (Snake/Dolphin) is an example of mammal.

Teacher's Signature: _____ Remarks: _____

25

Differentiated Activities

110 km/hr

What is the stage in a butterfly's life cycle where it stays inside a hard covering before becoming an adult?

80 km/hr

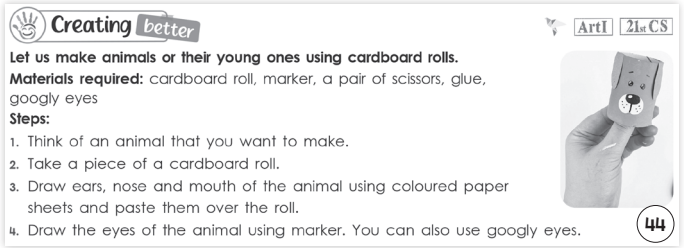
What is the process called when a tadpole transforms into a frog?

40 km/hr

What do we call the baby frog that hatches from an egg?

Home Task

The 'Creating better' activity (Let us make animals or their young ones using cardboard rolls.), given on page number 44 of the Main Course Book.



Creating better

ArtI 21st CS

Let us make animals or their young ones using cardboard rolls.

Materials required: cardboard roll, marker, a pair of scissors, glue, googly eyes

Steps:

1. Think of an animal that you want to make.
2. Take a piece of a cardboard roll.
3. Draw ears, nose and mouth of the animal using coloured paper sheets and paste them over the roll.
4. Draw the eyes of the animal using marker. You can also use googly eyes.

44

Period 10

SHOULD DO

5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Today, we will play a quick True or False game to recall what we have learned so far. I will read out a statement and you have to tell me whether it is true or false. Let us begin.

Teacher: Frogs lay their eggs in water. (True)

Teacher: The white part of an egg is called the yolk. (False)

Teacher: A nymph looks similar to the adult insect but is smaller. (True)

Teacher: A tadpole has legs when it hatches. (False)

Teacher: All birds lay eggs. (True)

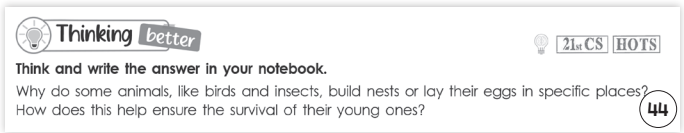
Teacher: Well done, everyone. You have remembered everything we have learned so far. Now, let us begin today's lesson.

Thinking Better

MUST DO

5 MIN.

Teacher: Today, we will be exploring how animals and humans take care of their young ones and how we can make better choices in our daily lives. Let us start with a thinking activity.



Thinking better

21st CS HOTS

Think and write the answer in your notebook.

Why do some animals, like birds and insects, build nests or lay their eggs in specific places? How does this help ensure the survival of their young ones?

44

Teacher: Think carefully and write your answer in your notebook. Why do some animals, like birds and insects, build nests or lay their eggs in specific places?

Teacher: Now, consider this—how does this help ensure the survival of their young ones? Write your thoughts in your notebook.

(Give students time to write.)

Teacher: Wonderful ideas. Now, let us move to the next activity.

Choosing Better

MUST DO

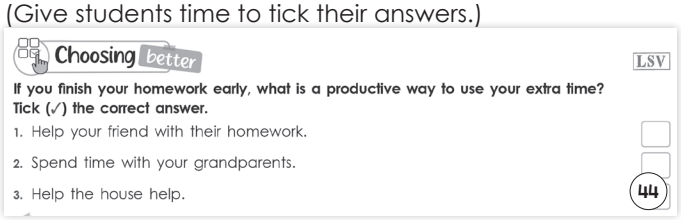
5 MIN.

Teacher: Now, let us talk about making good choices. Sometimes, we have extra time after finishing our work. If you finish your homework early, what is a productive way to use your extra time?

Teacher: Look at the three options given in your Main Course Book. Tick the one you think is the best choice.

1. Help your friend with their homework.
2. Spend time with your grandparents.
3. Help the house help.

(Give students time to tick their answers.)



Choosing better

LSV

If you finish your homework early, what is a productive way to use your extra time? Tick (✓) the correct answer.

1. Help your friend with their homework. ☐
2. Spend time with your grandparents. ☐
3. Help the house help. ☐

44

Teacher: Great. Now, let us share our answers and discuss why you chose them.

(Encourage students to share their choices and reasons.)

Teacher: Fantastic responses. Every small good choice we make can help others and make us better people.

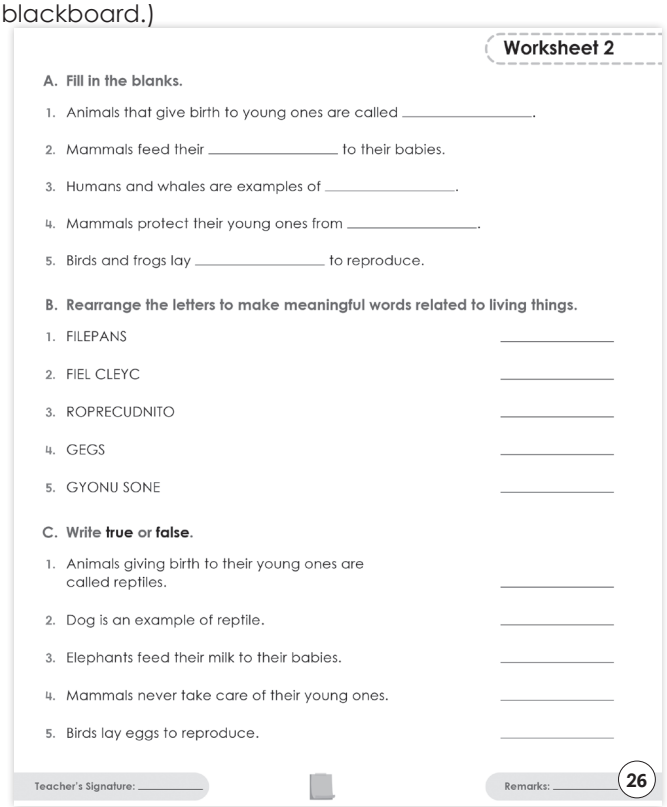
Worksheet-2

MUST DO

15 MIN.

Teacher: Let us do some activities from the workbook. Everybody, please open page number 26 of your workbook and answer the questions given in worksheet-2.

(Let the students answer the questions on their own. Then discuss the answer by writing the correct answer on the blackboard.)



Worksheet 2

A. Fill in the blanks.

1. Animals that give birth to young ones are called _____.
2. Mammals feed their _____ to their babies.
3. Humans and whales are examples of _____.
4. Mammals protect their young ones from _____.
5. Birds and frogs lay _____ to reproduce.

B. Rearrange the letters to make meaningful words related to living things.

1. FILEPANS _____
2. FIEL CLEYC _____
3. ROPRECUDNITO _____
4. GEGS _____
5. GYONU SONE _____

C. Write true or false.

1. Animals giving birth to their young ones are called reptiles. _____
2. Dog is an example of reptile. _____
3. Elephants feed their milk to their babies. _____
4. Mammals never take care of their young ones. _____
5. Birds lay eggs to reproduce. _____

Teacher's Signature: _____ Remarks: _____

26

Book of Holistic Teaching

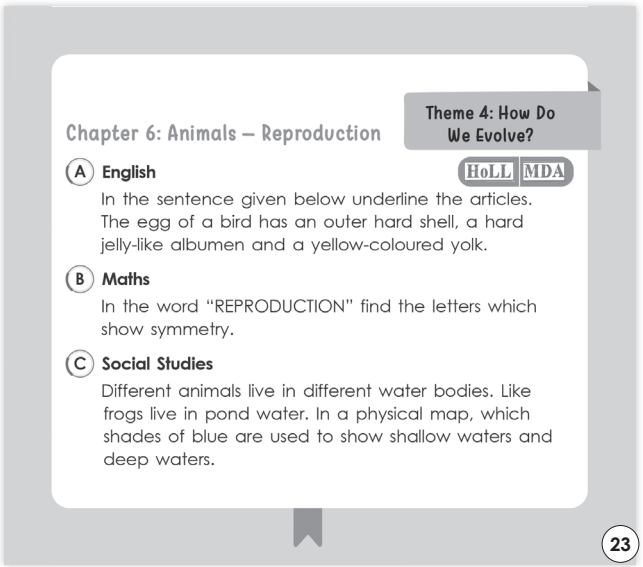
COULD DO

10 MIN.

Refer to the Book of Holistic Teaching, page number 23 under the title 'Animals – Reproduction.' Complete the activities mentioned in this section and ensure that the students complete them.

These activities are designed to enhance their holistic understanding and engagement with the topic. Provide any necessary support and materials to help the students successfully finish the activities.

You may show the **Quiz** on the digital platform.


Chapter 6: Animals – Reproduction

Theme 4: How Do We Evolve?

(A) **English** HoLL MDA

In the sentence given below underline the articles.
The egg of a bird has an outer hard shell, a hard jelly-like albumen and a yellow-coloured yolk.

(B) **Maths**

In the word "REPRODUCTION" find the letters which show symmetry.

(C) **Social Studies**

Different animals live in different water bodies. Like frogs live in pond water. In a physical map, which shades of blue are used to show shallow waters and deep waters.

23

Differentiated Activities

110 km/hr

What is the name of the process where an insect sheds its skin multiple times to grow?

80 km/hr

What do we call the stage in a frog's life cycle where it has both legs and a tail?

40 km/hr

What is the hard outer covering of a pupa called?

Home Task

The project Idea is given in the book of Project Ideas, page 17 under the title 'Animals – Reproduction.' This project should be assigned to the students to work on. Ensure that the students understand the project requirements and provide any necessary guidance or materials they might need. Encourage them to explore and learn about animal reproduction through this engaging project.

Period 11

SHOULD DO 5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Today, we will play a quick Complete the Sentence game to recall what we have learned in this chapter. I will read out an incomplete sentence and you have to complete it with the correct answer. Let us begin.

Teacher: A young cockroach that looks like an adult but is smaller is called a _____. (Nymph)

Teacher: The process of shedding skin in insects is called _____. (Moulting)

Teacher: The yellow part inside an egg that provides food is called _____. (Yolk)

Teacher: A baby frog with a tail that swims in water is called a _____. (Tadpole)

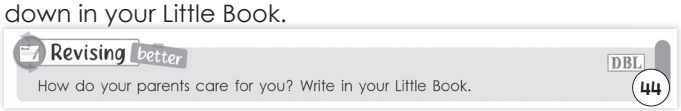
Teacher: Birds build _____ to keep their eggs safe. (Nests)

Teacher: Well done, everyone. You have learned so much in this chapter. Now, let us move on to today's lesson.

Revising Better

MUST DO 5 MIN.

Teacher: Now, let us reflect on something important. Our parents take care of us every day in many ways. Think about how they care for you and write it down in your Little Book.


Revising better DBL

How do your parents care for you? Write in your Little Book.

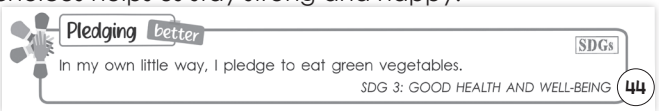
44

Pledging Better

MUST DO 5 MIN.

Teacher: Also, let us make a small pledge today. Write in your book:
In my own little way, I pledge to eat green vegetables.
(Give students time to write.)

Teacher: Excellent. Eating healthy and making good choices helps us stay strong and happy.


Pledging better SDGs

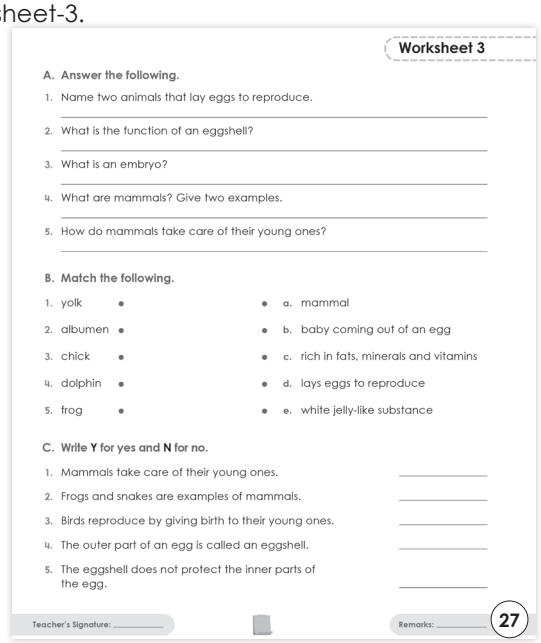
In my own little way, I pledge to eat green vegetables.

SDG 3: GOOD HEALTH AND WELL-BEING 44

Worksheet-3

MUST DO 15 MIN.

Teacher: Let us do some activities from the workbook. Everybody, please open page number 27 of your workbook and answer the questions given in worksheet-3.


Worksheet 3

A. Answer the following.

1. Name two animals that lay eggs to reproduce.
2. What is the function of an eggshell?
3. What is an embryo?
4. What are mammals? Give two examples.
5. How do mammals take care of their young ones?

B. Match the following.

1. yolk	•	•	a. mammal
2. albumen	•	•	b. baby coming out of an egg
3. chick	•	•	c. rich in fats, minerals and vitamins
4. dolphin	•	•	d. lays eggs to reproduce
5. frog	•	•	e. white jelly-like substance

C. Write Y for yes and N for no.

1. Mammals take care of their young ones. _____
2. Frogs and snakes are examples of mammals. _____
3. Birds reproduce by giving birth to their young ones. _____
4. The outer part of an egg is called an eggshell. _____
5. The eggshell does not protect the inner parts of the egg. _____

Teacher's Signature: _____ Remarks: _____

27

(Let the students answer the questions on their own. Then discuss the answer by writing the correct answer on the blackboard.)

Discuss the project assigned as the home task in the tenth period, focusing on helping students understand the objectives and addressing any challenges they face.

COULD DO

5 MIN.

Teacher: Now, let us fill in the last column of the KWL chart.

Teacher: In this column, we will write what we have learned in this chapter.

Teacher: Think about the topics, we have learned and write them neatly in the 'L' column of the chart.

(Wait for students to fill in the chart.)

SHOULD DO

5 MIN.

Differentiated Activities

110 km/hr

What is the name of the reproductive process where an animal gives birth to live young instead of laying eggs?

80 km/hr

Why do birds sit on their eggs after laying them?

40 km/hr

What do birds build to keep their eggs safe?

Home Task

Observe any bird or insect in your surroundings and write three sentences about how it moves, where it lives, and how it might take care of its young ones. Draw a picture of the bird or insect you observed and bring it to class for discussion.

Learning Outcomes

The students will:

Physical Development	• engage in hands-on activities such as making stick puppets and crafting animal models using cardboard rolls to develop fine motor skills.
Socio-Emotional and Ethical Development	• develop empathy and responsibility by understanding how animals care for their young ones and participating in activities like placing water for birds and animals.
Cognitive Development	• understand the concept of reproduction in animals, identify differences between egg-laying and live-birth animals, and explore the life cycles of birds, butterflies, and frogs.
Language and Literacy Development	• enhance listening and speaking skills by engaging in discussions, answering comprehension questions, and writing short and long answers related to animal reproduction.
Aesthetic and Cultural Development	• recognise symmetry in nature by observing butterflies, appreciate the role of animals in ecosystems, and explore cultural practices such as Ayurvedic massages for newborns.
Positive Learning Habits	• foster critical thinking and decision-making by reflecting on good habits, making healthy lifestyle pledges, and choosing meaningful activities to utilise free time productively.

Starry Knights

How was the learners' response to the activities related to animals and their young ones?

Award yourself a STAR for being so authentic!!

Lesson-7: Animals — Adaptation and Survival

12 Periods (40 minutes each)

Learn Better (Main Course Book), Stay Ahead (Workbook), Book of Holistic Teaching, Book of Project Ideas, Posters, CRM signs

Animation, Animated Activities, Dictionary, Concept Map, eBook, Slideshow, I Explain, Infographic, Quiz, Video, Test Generator

Affirming better
I love to take care of my pet.

Curricular Goals and Objectives (NCF)

To enable the students:

- to understand how animals adapt to their environment for survival.
- to classify animals based on habitat and identify their adaptations.
- to explore survival strategies and traditional treatments.
- to develop creativity through interactive activities.
- to enhance research and communication skills on animal adaptations.

Methodology

Period 1

SHOULD DO
5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Before we dive into our lesson, let us take a moment to relax and focus our minds with a short meditation. Ready?

Teacher: Sit comfortably in your chairs with your back straight and feet flat on the ground. Close your eyes gently and take a deep breath through your nose. Hold it for a moment, then slowly breathe out through your mouth.

Let us do these three more times. Breathe in... and breathe out. As you breathe, imagine your mind becoming clear and ready to learn.

Open your eyes and smile at your friends. Let us start our lesson with positive energy.

Affirming better

Affirming better I love to take care of my pet. PLH (45)

MUST DO
5 MIN.

Teacher: Before we start the class, let us all say together something positive, 'I love to take care of my pet.' Repeat after me: 'I love to take care of my pet.'

Teacher: Alright. Today, we are going to begin a new chapter 'Animals – Adaptation and Survival.' We use a KWL chart to help us organize our thoughts and learning. I have made a KWL format on the blackboard. Please take out your notebooks and draw the same format.

K	W	L

Teacher: Let us start by filling out the 'K' and 'L' columns. Take a few minutes to think and write. If you have any questions, feel free to ask.

Teacher: Before we start the chapter, we will do a quick Re-KAP, which involves revisiting our previous knowledge through creative activities using Kinaesthetic, Auditory and Pictorial methods to make our learning interactive and engaging.

Kinaesthetic

Kinaesthetic

Work in pairs. Draw a food item loved or eaten by an animal. For example, bananas are eaten by monkeys. Swap your drawings, colour them and guess which animal eats that food item. (45)

MUST DO
10 MIN.

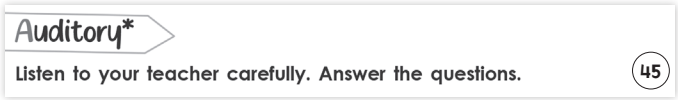
Teacher: Today, we will begin with a fun activity to learn about the food that animals eat. You will work in pairs for this task.

Teacher: Think of an animal and a food that it loves to eat. For example, monkeys love bananas. Now, each of you will draw a food item that is loved or eaten by an animal.

Teacher: Once you have drawn and coloured your food item, swap your drawing with your partner. Now, look at your partner's drawing and guess which animal eats that food.

Teacher: Great job. Now, let us discuss.
(Encourage students to share their answers.)
Teacher: Well done, everyone. Let us move on to the next part of our lesson.

Auditory



MUST DO
10 MIN.

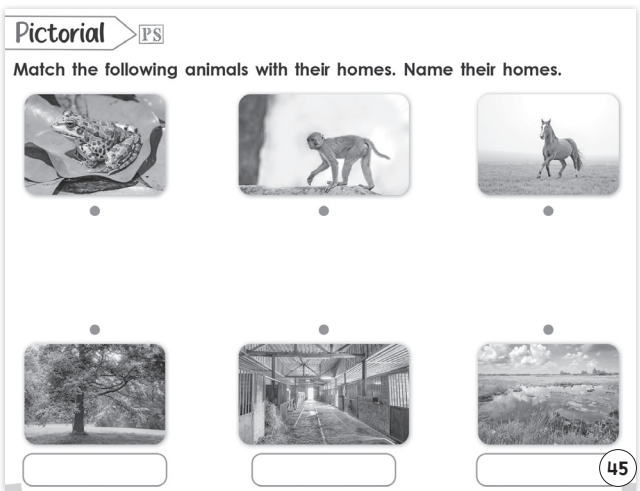
Teacher: Now, let us move to the Auditory section. Listen carefully. I will ask some questions and you will answer them. Pay close attention because you will need to think before you respond.

In a colourful jungle, some animals are herbivores like cows that eat grass, while carnivores like lions tear meat with their sharp teeth. Omnivores, like bears, eat both plants and animals.

1. Which animals in the jungle eat only plants?
2. How do carnivores like lions eat their food?

(Wait for students to answer)
Teacher: Great listening. Keep it up.

Pictorial



MUST DO
10 MIN.

Teacher: Excellent. Now, we have a pictorial activity. Look at the pictures on page 45 of your Main Course Book. You can see different animals and different places. Your task is to match each animal with its home.

Teacher: Observe the pictures carefully. A horse does not live in a tree and a frog does not live in a stable. Think about where each animal lives and write the correct name of their home.

(Give students time to complete the activity and discuss the correct answers.)
Teacher: Wonderful. Now, let us share our answers.
Teacher: Great work, everyone. You all did a fantastic job with all these activities.

Differentiated Activities

110 km/hr

What is the name of animals that eat both plants and meat?

80 km/hr

What is the home of a frog called?

40 km/hr

Name one food that a horse eats.

Home Task

Draw and colour a picture of your favourite animal in its home. Write one sentence about where it lives and one sentence about what it eats. Bring it to class for discussion.

Period 2

Interacting Better

MUST DO
10 MIN.

Teacher: Good morning, students. How are you all today?
Teacher: Great. Today, we will start with an 'Interacting better' activity. Look outside the window. Can you see any birds or insects flying?
Teacher: Now, think about all the animals and insects you know. Ask your partner to name some that can fly.
(Give time for students to interact.)
(Use CRM signs to settle the class.)
Teacher: Great answers.

Teacher: Look at the pictures on page 46 of your Main Course Book. Maria and her mother saw a dog with her puppies. I want you to read the animated story. Once you have finished reading, I will talk about what you learned. Ready? Go ahead and read the story.

MUST DO
30 MIN.

(Give time to the students to read the story)

Teacher: Now that you have read the story, let us discuss some questions to check your understanding.

Teacher: Maria and her mother return home from the mall and Maria's father invites her to the park. Why do you think Maria is excited to go to the park?

Teacher: While at the park, Maria sees a dog and remembers something her mother told her. What does she recall about dogs and their ancestors?

Teacher: Maria's father agrees with her and gives an example of human evolution. What example does he use?

Teacher: The story mentions that animals, including dogs, need to adapt to their surroundings. How do dogs respond to hot weather?

Teacher: Maria is curious about how dogs feel in winter. What does her father explain about how they keep warm?

Teacher: Dogs curl up to conserve body heat in the winter. Can you think of other animals that change their behaviour or appearance to survive in different seasons?

Teacher: Fantastic answers. Animals have amazing ways of adapting to their surroundings. Now, let us move on to our next activity.

You may show the **Dictionary** and **eBook** on the digital platform.

Differentiated Activities

110 km/hr

What is the process called when animals change over generations to survive in their environment?

80 km/hr

How do dogs keep themselves warm in winter?

40 km/hr

What do birds use to fly?

Home Task

Observe an animal in your surroundings, such as a pet or a street animal. Write two sentences about how it behaves in different weather conditions. Bring your observations to the next class.

Period 3

Teacher: Good morning, students. How are you all today?

SHOULD DO
5 MIN.

Teacher: Let us begin today's lesson with a fun game. I will call out an animal and you have to act like that animal by showing how it moves or behaves in different weather conditions.

Teacher: Dog in summer – Pretend to pant and look for shade.

Teacher: Dog in winter – Curl up into a ball as if keeping warm.

Teacher: Bird flying – Spread your arms and flap like a bird.

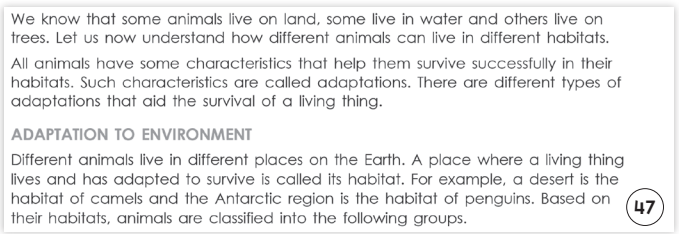
Teacher: Frog in water – Hop like a frog and pretend to swim.

Teacher: Butterfly emerging from a chrysalis – Slowly stretch and spread your arms like wings.

Teacher: Great job, everyone. You remembered how animals move and adapt to their surroundings. Now, let us begin today's lesson.

Teacher: Today, we will learn about how different animals survive in different places.

MUST DO
20 MIN.



We know that some animals live on land, some live in water and others live on trees. Let us now understand how different animals can live in different habitats.

All animals have some characteristics that help them survive successfully in their habitats. Such characteristics are called adaptations. There are different types of adaptations that aid the survival of a living thing.

ADAPTATION TO ENVIRONMENT

Different animals live in different places on the Earth. A place where a living thing lives and has adapted to survive is called its habitat. For example, a desert is the habitat of camels and the Antarctic region is the habitat of penguins. Based on their habitats, animals are classified into the following groups.

47

(The teacher will read the first four paragraphs of page 47 aloud and provide explanations to ensure that the students understand the content.)

Teacher: Let me start with a question. Do all animals live in the same kind of environment?

Teacher: That is right. Some animals live on land, some in water and others on trees. Which characteristics help animals to survive in different habitats?

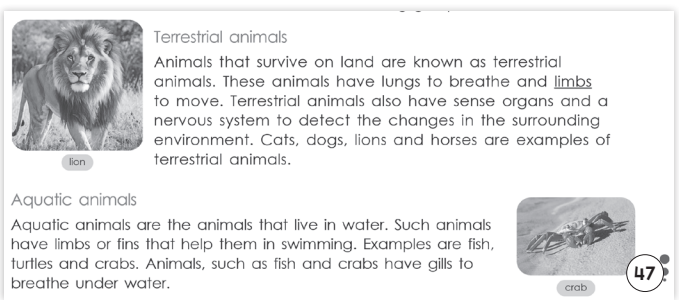
Teacher: Correct. Each animal has special characteristics that help it survive in its habitat. These characteristics are called adaptations. Can you think of some animals and the places where they live?

Teacher: Excellent. What do we call the place where an animal lives?

Teacher: Yes. A habitat is a place where a living thing survives. Can you give an example of an animal and its habitat?

Teacher: That is correct. The desert is the habitat of camels and the Antarctic region is the habitat of penguins. Now, let us talk about terrestrial animals.

MUST DO
15 MIN.



lion

Terrestrial animals

Animals that survive on land are known as terrestrial animals. These animals have lungs to breathe and limbs to move. Terrestrial animals also have sense organs and a nervous system to detect the changes in the surrounding environment. Cats, dogs, lions and horses are examples of terrestrial animals.

Aquatic animals

Aquatic animals are the animals that live in water. Such animals have limbs or fins that help them in swimming. Examples are fish, turtles and crabs. Animals, such as fish and crabs have gills to breathe under water.

crab

47

Teacher: What do we call animals that live on land?
Teacher: Well done. Terrestrial animals live on land and have lungs to breathe. They also have limbs to move.

Discovering better

Teacher: Can you name some terrestrial animals?
Teacher: Great. Cats, dogs, lions and horses are all terrestrial animals. But how do they sense danger in their surroundings?
Teacher: Yes. Terrestrial animals have sense organs and a nervous system to detect changes around them. Now, let us move to aquatic animals.
Teacher: What do we call animals that live in water?
Teacher: Correct. Aquatic animals have fins or webbed feet that help them swim. Some have gills that help them breathe underwater. Can you name a few aquatic animals?
Teacher: Excellent. Fish, turtles and crabs are aquatic animals. Now, let us do a fun activity.
You may show the **I Explain** on the digital platform.

Differentiated Activities

110 km/hr
What is the function of gills in aquatic animals?
80 km/hr
Name one characteristic that helps terrestrial animals survive.
40 km/hr
What do we call animals that live on land?

Home Task

Observe your surroundings and list three animals you see. Write their names and their habitats in your notebook. Bring your observations to class for discussion.

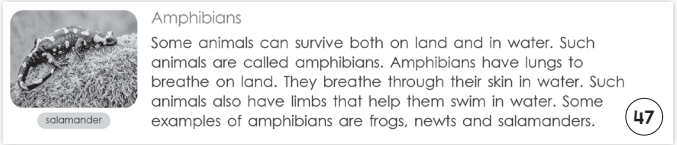
Period 4

SHOULD DO 5 MIN.

Teacher: Good morning, students. How are you all today?
Teacher: I will describe an animal and you have to guess which one I am talking about. Let us begin.
Teacher: I can survive both on land and in water. I breathe through my skin in water. Who am I? (Amphibian - Frog/ Salamander)
Teacher: I have wings and I am the only mammal that can fly. Who am I? (Bat)
Teacher: I spend most of my time in trees, using my strong limbs to climb. Who am I? (Squirrel)
Teacher: I fly high in the sky and my light body helps me soar easily. Who am I? (Eagle)
Teacher: I have limbs that help me swim in water, but I also have lungs to breathe on land. Who am I? (Newt)
Teacher: Excellent answers. You all remember animal adaptations very well. Now, let us begin today's lesson.
Teacher: We have learned about animals that live on land and in water. Today, let us explore a special group called amphibians.

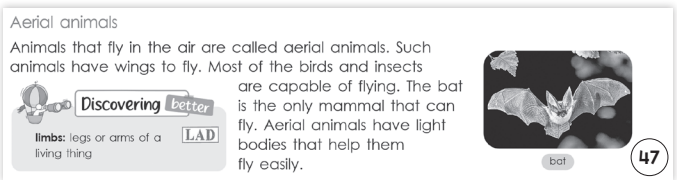
MUST DO 15 MIN.

(The teacher will read the last two paragraphs of page 47 and the first paragraphs of page 48 aloud and provide explanations to ensure that the students understand the content.)



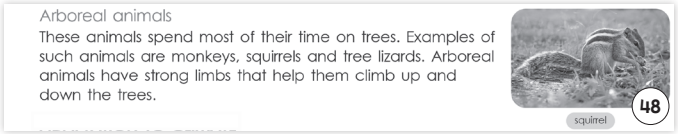
Teacher: What do we call animals that can live both in water and on land?
Teacher: That is right. Amphibians have lungs to breathe on land and use their skin to breathe in water. Can you name some examples of amphibians?
Teacher: Well done. Frogs, newts and salamanders are amphibians. How do amphibians move in water?
Teacher: Yes. They have limbs that help them swim. Now, let us move on to aerial animals.

MUST DO 10 MIN.



Teacher: What do we call animals that fly in the air?
Teacher: That is correct. Aerial animals have wings to fly and most birds and insects belong to this group. Can you name an aerial animal that is not a bird or insect?
Teacher: Well done. The bat is the only mammal that can fly. How do aerial animals fly so easily?
Teacher: Yes. They have light bodies that help them stay in the air. Now, let us discuss arboreal animals.

MUST DO 10 MIN.


Arboreal animals
These animals spend most of their time on trees. Examples of such animals are monkeys, squirrels and tree lizards. Arboreal animals have strong limbs that help them climb up and down the trees.
squirrel
48

Teacher: Where do arboreal animals spend most of their time?

Teacher: That is right. They live in trees. What special feature helps them move easily on trees?

Teacher: Yes. They have strong limbs that help them climb up and down. Can you name some arboreal animals?

Teacher: Great. Monkeys, squirrels and tree lizards are arboreal animals. Now, let us do a quick activity.

You may show the **Video** on the digital platform.

Differentiated Activities

110 km/hr

How do amphibians breathe in water?

80 km/hr

What is the only mammal that can fly?

40 km/hr

Where do arboreal animals live?

Home Task

Observe any animal in your surroundings and write five sentences about where it lives and how it moves. Draw a picture of the animal and bring it to class for discussion.

Period 5

SHOULD DO
5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: I will describe an animal and its adaptation and you have to guess which animal I am talking about. Let us begin.

Teacher: I can live both in water and on land. My skin is moist and I lay my eggs in water. Who am I? (Amphibian - Frog)

Teacher: I have wings to fly and I build my nest on trees. Who am I? (Aerial animal - Bird)

Teacher: I spend most of my time on trees and use my strong limbs to climb. Who am I? (Arboreal animal - Monkey)

Teacher: I have gills to breathe underwater and I swim using my fins. Who am I? (Aquatic animal - Fish)

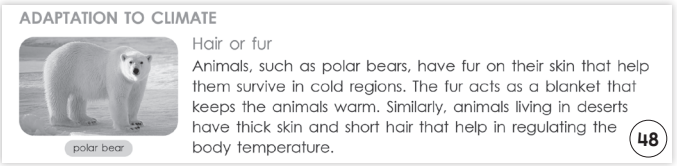
Teacher: I live on land and have lungs to breathe. I also have sharp claws to protect myself. Who am I? (Terrestrial animal - Lion)

Teacher: Fantastic answers. You have remembered all the different animal adaptations and habitats. Now, let us move on to today's lesson.

Teacher: Today, we will learn about the adaptation of animals to climate and food.

MUST DO
15 MIN.

(The teacher will read the second to sixth paragraphs of page 48 aloud and provide explanations to ensure that the students understand the content.)


ADAPTATION TO CLIMATE
Hair or fur
Animals, such as polar bears, have fur on their skin that help them survive in cold regions. The fur acts as a blanket that keeps the animals warm. Similarly, animals living in deserts have thick skin and short hair that help in regulating the body temperature.
polar bear
48

Teacher: Now that you have read, let us discuss. Some animals, like polar bears, live in extremely cold places. How do they survive in such cold regions?

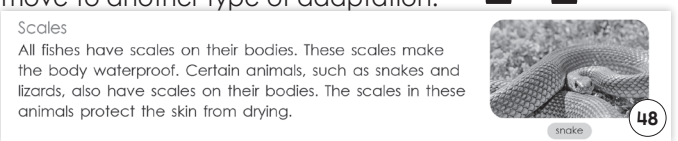
Teacher: That is correct. They have fur on their skin, which acts like a blanket and keeps them warm. Can you think of another animal that has fur to stay warm?

Teacher: Well done. Now, let us talk about desert animals. Do they have fur like polar bears?

Teacher: No. Desert animals have thick skin and short hair. Why do you think this helps them?

MUST DO
10 MIN.

Teacher: Yes. It helps them regulate their body temperature. Now, let us move to another type of adaptation.


Scales
All fishes have scales on their bodies. These scales make the body waterproof. Certain animals, such as snakes and lizards, also have scales on their bodies. The scales in these animals protect the skin from drying.
snake
48

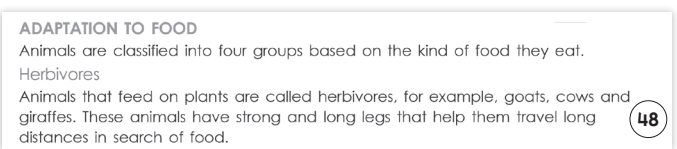
Teacher: Let us discuss the section on Scales. We read that all fishes have scales on their bodies. Why do you think fishes need scales?

Teacher: That is right. Scales make their bodies waterproof and help them swim easily. But fishes are not the only animals with scales. Can you name another animal that has scales?

Teacher: Good. Snakes and lizards also have scales. How do scales help them?

MUST DO
10 MIN.

Teacher: Yes. Their scales protect their skin from drying. Now, let us move on to Adaptation to Food.


ADAPTATION TO FOOD
Animals are classified into four groups based on the kind of food they eat.
Herbivores
Animals that feed on plants are called herbivores, for example, goats, cows and giraffes. These animals have strong and long legs that help them travel long distances in search of food.
48

Teacher: Let us discuss the section on adaptation to food.

Teacher: Animals are classified into different groups based on what they eat. What do we call animals that feed only on plants?

Teacher: Correct. Herbivores eat plants. Can you name some herbivores?

Teacher: Well done. Goats, cows and giraffes are herbivores. But why do herbivores have long and strong legs?

Teacher: Yes. They travel long distances in search of food. Now, let us do a quick activity.

Differentiated Activities

110 km/hr

How do scales help snakes and lizards survive?

80 km/hr

Name one animal that has fur to keep warm.

40 km/hr

What do we call animals that eat only plants?

Home Task

Find any two animals that live in different climates (one in a cold place and one in a hot place). Write two sentences about how they adapt to their surroundings and bring it to class for discussion.

Period 6

SHOULD DO
5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: I will describe an animal's adaptation and you have to guess which animal I am talking about. Let us begin.

Teacher: I have thick fur to keep me warm in freezing temperatures. Who am I? (Polar bear)

Teacher: I have scales that protect my body and help me survive in dry conditions. Who am I? (Snake)

Teacher: I have webbed feet that help me swim in water. Who am I? (Duck)

Teacher: I have a long neck and strong legs to help me reach food high up in trees. Who am I? (Giraffe)

Teacher: I have a sharp beak and strong claws to help me catch and eat my prey. Who am I? (Eagle)

Teacher: Great answers. You have remembered all the adaptations we have learned so far. Now, let us begin today's lesson.

Teacher: Today, we will continue our learning about the adaptation of animals to food.

MUST DO
10 MIN.

(The teacher will read the last three paragraphs of page 48 aloud and provide explanations to ensure that the students understand the content.)

Carnivores

Animals, such as tigers and lions, eat flesh of other animals and are known as carnivores. Such animals have sharp and pointed tearing teeth. Carnivorous birds, such as eagles and vultures, have sharp and pointed beaks to tear through the flesh. 48

Teacher: What do we call animals that eat the flesh of other animals?

Teacher: That is correct. Carnivores feed on meat. What kind of teeth do carnivores have to help them eat meat?

Teacher: Well done. Carnivores have sharp and pointed tearing teeth. Can you name some carnivores?

Teacher: Excellent. Tigers, lions and wolves are carnivores. But not all carnivores have teeth. Some birds are also carnivores. How do carnivorous birds like eagles and vultures eat their food?

MUST DO
10 MIN.

Teacher: Yes. They have sharp, pointed beaks to tear through flesh. Now, let us move on to omnivores.

Omnivores

These are animals that eat both plants and animals. The digestive system of such animals can absorb nutrients from both plants and animals. Examples of omnivores include crows, cockroaches and bears. 48

Teacher: Let us discuss the section on Omnivores. What do we call animals that eat both plants and animals?

Teacher: That is right. Omnivores have a digestive system that helps them absorb nutrients from both. Can you name some omnivores?

Teacher: Good. Crows, cockroaches and bears are omnivores. Why do you think being an omnivore is an advantage?

MUST DO
10 MIN.

Teacher: Yes. Omnivores have more food options than carnivores and herbivores. Now, let us learn about parasites.

Parasites

Parasites live either on or inside the body of other animals, known as hosts. They depend on their host for survival. Examples of parasites are leeches, bugs and mosquitoes. 48

Teacher: What do we call animals that live on or inside another animal's body to survive?

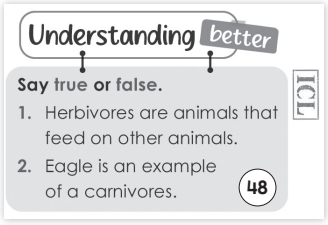
Teacher: Correct. Parasites depend on other animals for food. What do we call the animal on which a parasite lives?

Teacher: That is right. The host provides food for the parasite. Can you name some parasites?

Teacher: Well done. Leeches, bugs and mosquitoes are parasites. How do parasites harm their hosts?

Teacher: Yes. Some suck blood, while others cause diseases. Now, let us move on to a quick activity.

Understanding better



MUST DO
5 MIN.

Teacher: Let us do the understanding better activity given on page number 48.

Teacher: I shall read out the two statements and you will say whether you think it is true or false. Here is the first one: 'Herbivores are animals that feed on other animals.'

Teacher: If you said 'false,' you are correct. Well done. Now, here is the second statement: 'Eagle is an example of a carnivore.'

Teacher: If you said 'true,' you are correct. Wonderful. Great discussion, everyone.

You may show the **Animation** on the digital platform.

Differentiated Activities

110 km/hr

How do the teeth of carnivores help them survive?

80 km/hr

Name one omnivorous animal.

40 km/hr

What do we call animals that feed on the blood of other animals?

Home Task

Observe any animal in your surroundings and find out what it eats. Write two sentences about its food habits and classify it as a Carnivore, Omnivore, or Herbivore. Bring your findings to class for discussion.

Period 7

SHOULD DO 5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Good morning, everyone. Before we begin today's lesson, let us play a quick food chain game. I will describe the diet of an animal and you have to guess which type of feeder it is—Carnivore, Omnivore, or Parasite. Let us begin.

Teacher: I eat only the flesh of other animals. My teeth are sharp and pointed. Who am I? (Carnivore)

Teacher: I eat both plants and animals. My digestive system helps me absorb nutrients from both. Who am I? (Omnivore)

Teacher: I do not hunt for food but survive by living on or inside another animal. Who am I? (Parasite)

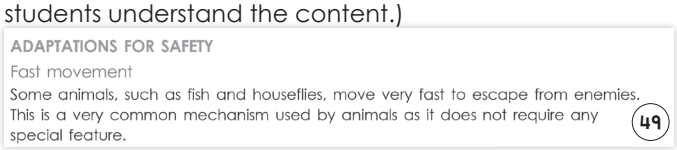
Teacher: I have a sharp, curved beak to tear meat. I am a bird of prey. Who am I? (Carnivorous bird - Eagle/Vulture)

Teacher: I crawl on the ground and suck blood from animals. Who am I? (Parasite - Leech)

Teacher: Great job. You all identified the types of animals based on their food habits. Now, let us explore this topic in detail.

Teacher: Today, we will learn about how animals protect themselves from predators.

(The teacher will read the first four paragraphs of page 49 aloud and provide explanations to ensure that the students understand the content.)


ADAPTATIONS FOR SAFETY

Fast movement

Some animals, such as fish and houseflies, move very fast to escape from enemies. This is a very common mechanism used by animals as it does not require any special feature.

49

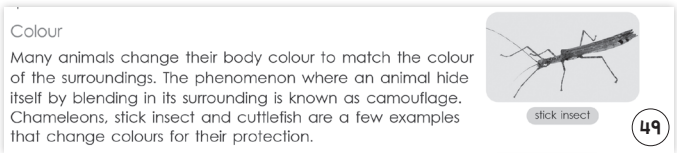
MUST DO 10 MIN.

Teacher: Some animals have a special way of escaping danger by moving very fast. Can you name an animal that uses speed to escape from enemies?

Teacher: That is right. Fish and houseflies move very fast to escape predators. Why do you think this is an effective way to survive?

Teacher: Yes. Running or flying quickly helps them avoid being caught. Now, let us talk about another type of adaptation – Colour Change.

MUST DO 10 MIN.


Colour

Many animals change their body colour to match the colour of the surroundings. The phenomenon where an animal hide itself by blending in its surrounding is known as camouflage. Chameleons, stick insect and cuttlefish are a few examples that change colours for their protection.

stick insect

49

Teacher: Think about how animals use their colours to blend into their surroundings.

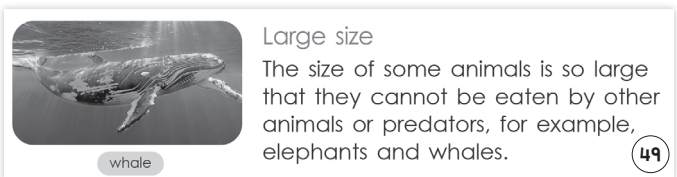
Teacher: What do we call the ability of animals to change their body colour to blend with the surroundings?

Teacher: Correct. This is called camouflage. Can you name some animals that use camouflage to protect themselves?

Teacher: Well done. Chameleons, stick insects and cuttlefish all change colour for protection. Why do you think this is helpful for them?

Teacher: That is right. It makes them almost invisible, so predators cannot see them easily. Now, let us move on to another adaptation – Large Size.

MUST DO 10 MIN.



whale

Large size

The size of some animals is so large that they cannot be eaten by other animals or predators, for example, elephants and whales.

49

Teacher: Some animals are so big that predators do not attack them. Can you name some animals that are protected because of their large size?

Teacher: Correct. Elephants and whales are too big to be eaten by most predators. But what about small animals? How do they protect themselves?

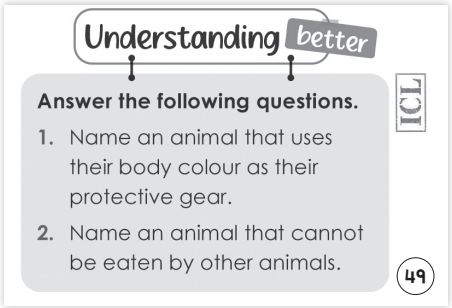
Teacher: That is right. Some animals have Poisonous Bites to defend themselves.

Teacher: What do we call the liquid that some animals, like snakes and spiders, use to protect themselves?

Teacher: Yes. It is called venom. How does venom help these animals survive?

Teacher: Excellent. It scares predators away and helps them catch food. Now, let us do a quick activity.

Understanding better



Teacher: Let us do the understanding better activity given on page number 49.

MUST DO
5 MIN.

Teacher: I shall read out the two questions and you have to answer them. Here is the first one: 'Name an animal that uses their body colour as their protective gear.'

Teacher: Correct. Now, here is the second question: 'Name an animal that cannot be eaten by other animals.'

Teacher: Yes, you are correct. Great discussion, everyone.

You may show the **Slideshow** on the digital platform.

Differentiated Activities

110 km/hr

What is the name of the special ability that allows animals to change their body colour for protection?

80 km/hr

Name one animal that cannot be eaten by other predators because of its large size.

40 km/hr

What do we call the liquid that poisonous animals use to protect themselves?

Home Task

Observe any small animal or insect in your surroundings. Write two sentences about how it protects itself from danger. Bring your observations to class for discussion.

Period 8

SHOULD DO
5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Before we begin today's lesson, let us play a quick matching game. I will describe an animal's survival strategy and you have to tell me which adaptation it belongs to.

Teacher: I sleep for several months in winter to survive extreme cold. (Hibernation)

Teacher: I sleep in the summer to prevent loss of water from my body. (Aestivation)

Teacher: I have sharp needle-like structures on my body to protect myself. (Spines)

Teacher: I have a hard covering over my body that keeps me safe from predators. (Shells)

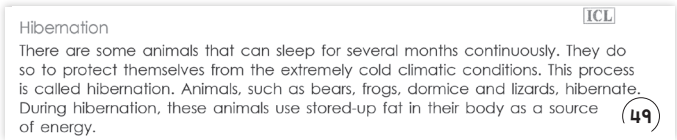
Teacher: I use my venom to defend myself from predators. (Poisonous Bite)

Teacher: Great job. You have remembered the different adaptations animals use for protection. Now, let us begin today's lesson.

Teacher: Today, we will learn about how animals adapt themselves for safety.

MUST DO
10 MIN.

(The teacher will read the last three paragraphs of page 49 and the first paragraph of page 50 aloud and provide explanations to ensure that the students understand the content.)



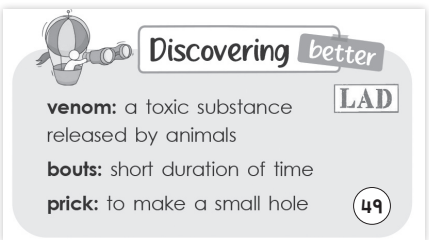
Teacher: Some animals sleep for several months during winter to protect themselves from the cold. What do we call this process?

Teacher: That is correct. Hibernation helps animals survive extreme cold. Can you name some animals that hibernate?

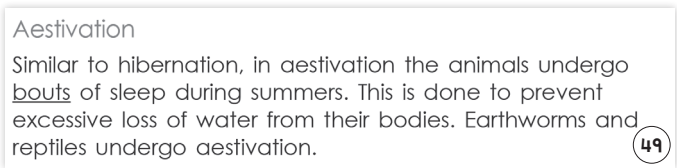
Teacher: Well done. Bears, frogs, dormice and lizards hibernate. What do they use as a source of energy during hibernation?

Teacher: Yes. They use stored fat in their body. Now, let us talk about a similar process that happens in summer.

Discovering Better



(Explain the terms mentioned in the activity. And discuss with the class.)



Teacher: Some animals sleep during hot months to prevent water loss. What do we call this process?

MUST DO
10 MIN.

Teacher: Correct. Aestivation helps animals survive extreme heat. Can you name some animals that Aestivate?

Teacher: Good. Earthworms and reptiles go through aestivation.
Now, let us move to another adaptation – Spines.


porcupine

Spines

Spines refer to sharp needle-like structures present on the body of some animals. When any other animal tries to attack these animals, the spines prick (49)

MUST DO
10 MIN.

Teacher: Some animals have sharp, needle-like structures on their bodies to protect themselves. What do we call these structures?
Teacher: That is right. Spines help animals defend themselves from predators. Can you name an animal that has spines?
Teacher: Well done. Porcupines use spines to keep predators away. What happens when an attacker touches a porcupine's spine?
Teacher: Yes. The spines prick the attacker, causing pain.

Shells

Animals, such as turtles and tortoises, have a tough and protective shell over their body. When another animal attacks, they hide themselves inside the shell. (50)

Teacher: Some animals have a tough and protective outer covering to keep them safe. What do we call this covering?
Teacher: Correct. It is called a shell. Can you name some animals that have shells?
Teacher: Good. Turtles and tortoises have shells. How do these animals use their shells when they sense danger?
Teacher: Yes. They hide inside their shells to protect themselves from predators. Now, let us do a quick activity.

Connecting Better

MUST DO
5 MIN.

Teacher: Now let us discuss the 'Connecting better' given on page 50. Maria asks Jas about an arboreal animal that has patterns on its body. What does Jas answer?
Teacher: That is right. Squirrels have patterns on their bodies. Why do you think patterns help some animals?
Teacher: Yes. Patterns help animals blend into their surroundings and avoid predators. Can you think of another animal that has patterns on its body for protection?
Teacher: Great answers. Now, let us explore more about adaptations in arboreal animals.
You may show the **Concept Map** on the digital platform.

Differentiated Activities

110 km/hr
What is the process of animals sleeping in summer to avoid water loss?

80 km/hr
Name one animal that has spines for protection.

40 km/hr
What do turtles use to protect themselves?

Home Task

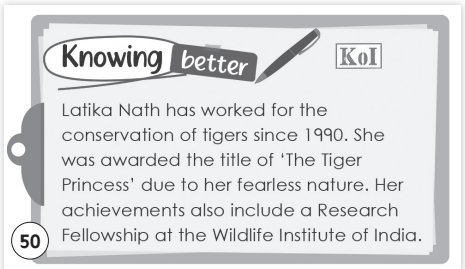
Observe any animal in your surroundings that has a special way of protecting itself. Write two sentences about its survival strategy and bring it to class for discussion.

Period 9

SHOULD DO
5 MIN.

Teacher: Good morning, students. How are you all today?
Teacher: Before we begin today's lesson, let us start today's lesson with a quick rapid-fire game to test your memory on animal adaptations. I will ask a question and you have to answer quickly. Are you ready?
Teacher: What is the process where animals sleep through winter to survive the cold? (Hibernation)
Teacher: What do we call the process where animals sleep during the summer to prevent water loss? (Aestivation)
Teacher: Which adaptation allows animals to blend into their surroundings to avoid predators? (Camouflage)
Teacher: What do we call the tough outer covering that protects turtles? (Shell)
Teacher: What adaptation do porcupines use to defend themselves? (Spines)
Teacher: Fantastic answers. You all remembered the different adaptations and their importance in animal survival. Now, let us begin today's lesson.

Knowing Better

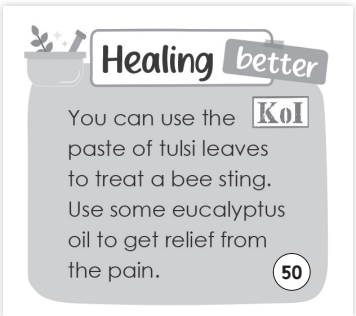


Teacher: Now let us discuss 'Knowing better' on page 50.

MUST DO
5 MIN.

Teacher: Latika Nath is known as 'The Tiger Princess.' What has she worked for since 1990?
Teacher: Correct. She has worked for the conservation of tigers. What special recognition was she awarded?
Teacher: Well done. She received a Research Fellowship at the Wildlife Institute of India. Why do you think tiger conservation is important?
Teacher: Excellent responses. Protecting tigers helps maintain balance in the ecosystem. Now, let us learn about a natural remedy for bee stings.

Healing Better



Teacher: Look at the section on Healing Better and read about how natural remedies can help treat a bee sting.

MUST DO
5 MIN.

Teacher: According to the lesson, what can be used to treat a bee sting?
Teacher: That is correct. The paste of tulsi leaves and eucalyptus oil can help relieve pain. Why do you think natural remedies are useful?
Teacher: Yes. They are easily available and do not have harmful chemicals. Can you name another natural remedy for treating skin problems?

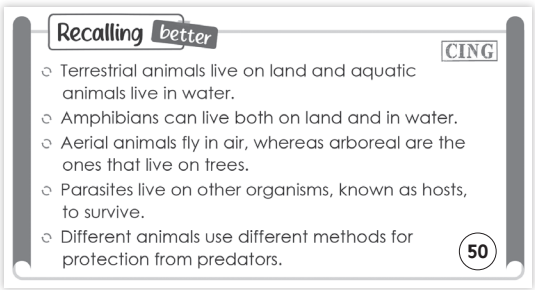
Laughing Better

Teacher: Let us take a short fun break before we continue with our lesson. I have a joke for you. Listen carefully.

MUST DO
5 MIN.

Teacher: Why do you think giraffes do not make good detectives?
Teacher: Interesting guesses. Now, here is the answer—Because they always stick their necks out.
Teacher: That was a good one, right? Jokes make learning fun and help us remember things better. Can you think of another animal joke to share with the class?
Teacher: Great answers. Laughter is a great way to enjoy learning. Now, let us move on to our next topic.

Recalling Better

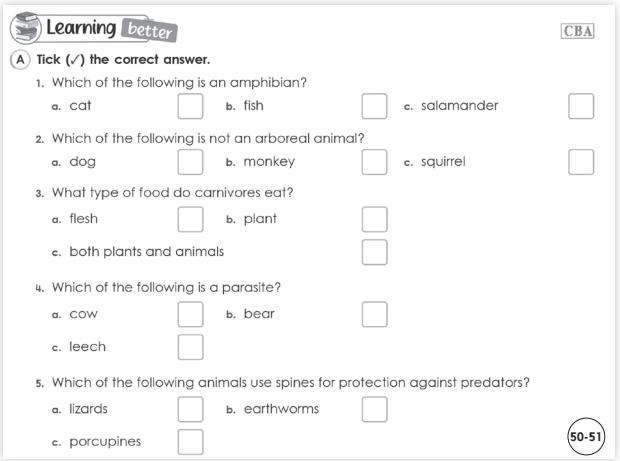


Teacher: Now that you have read, let us review. Where do terrestrial animals live?

MUST DO
15 MIN.

Teacher: That is correct. Terrestrial animals live on land. What about aquatic animals?
Teacher: Yes. They live in water. Can you give examples of both terrestrial and aquatic animals?
Teacher: Well done. Now, let us talk about amphibians. How are they different from terrestrial and aquatic animals?
Teacher: That is right. Amphibians can live both on land and in water. Can you name an example of an amphibian?
Teacher: Excellent. Now, let us move to aerial and arboreal animals. What is the difference between them?
Teacher: Good answer. Aerial animals fly in the air, while arboreal animals live in trees. Can you name one aerial and one arboreal animal?
Teacher: Great. Now, let us discuss parasites. What do parasites depend on for survival?
Teacher: Correct. They live on or inside another organism, which is called a host. Can you name a few parasites?
Teacher: Well done. Lastly, how do different animals protect themselves from predators?
Teacher: Yes. Some use camouflage, some have hard shells, others use venom and some are too large to be eaten. Can you think of an animal that uses one of these methods?
Teacher: Excellent responses. You all have a great understanding of these concepts. Now, let us move on to our next activity.

Learning better



Learning better CBA

A Tick (✓) the correct answer.

1. Which of the following is an amphibian?
   a. cat ☐ b. fish ☐ c. salamander ☐
2. Which of the following is not an arboreal animal?
   a. dog ☐ b. monkey ☐ c. squirrel ☐
3. What type of food do carnivores eat?
   a. flesh ☐ b. plant ☐
   c. both plants and animals ☐
4. Which of the following is a parasite?
   a. cow ☐ b. bear ☐
   c. leech ☐
5. Which of the following animals use spines for protection against predators?
   a. lizards ☐ b. earthworms ☐
   c. porcupines ☐

50-51

Teacher: Everyone please open page number 50 of your book. We have an exercise called 'Learning Better.' In Exercise 'A' of 'Learning better' you have to tick the correct answer. Are you ready to get started?

MUST DO 5 MIN. ☐

Teacher: Great. Let us begin with the first question. Which of the following is an amphibian?

Teacher: The correct answer is shoot. Well done.

(Similarly complete all five questions)

You may show the **Infographic** and **Animated Activities** on the digital platform.

Differentiated Activities

110 km/hr

How does Latika Nath contribute to tiger conservation?

80 km/hr

Name one natural remedy for treating a bee sting.

40 km/hr

Who is known as 'The Tiger Princess'?

Home Task

The 'Creating better', activity (Let us create a polar bear's habitat), on page 51 of the Main Course Book.

Period 10

Teacher: Good morning, students. How are you all today?

SHOULD DO 5 MIN. ☐

Teacher: Good morning, everyone. Let us begin today's lesson with some fun riddles to recall what we have learned so far about animal adaptations. I will read a riddle and you have to guess the correct animal. Let us begin.

Teacher: I live in water, but I am not a fish. I have a shell to protect myself. Who am I? (Turtle)

Teacher: I blend into my surroundings to avoid predators. I can change colours. Who am I? (Chameleon)

Teacher: I sleep for months during the winter to survive the cold. Who am I? (Bear)

Teacher: I am a parasite that feeds on blood. People try to swat me away. Who am I? (Mosquito)

Teacher: I have sharp, pointed teeth to tear meat. I am a great hunter. Who am I? (Tiger)

Teacher: Fantastic answers. You all remembered the different animal adaptations and survival techniques. Now, let us begin today's lesson.

Learning Better

B Fill in the blanks.

1. Animals that live on _____ are called terrestrial animals.
2. Polar bears have _____ on their skin to protect them from cold weather.
3. _____ feed only on plants.
4. _____ live either on or inside the body of the other animals, known as hosts.
5. The process of sleeping for a long duration in winter season is known as _____.

51

Teacher: Let us do Exercise 'B' of the 'Learning better' section, you have to fill in the blanks. Are you ready to get started?

MUST DO 5 MIN. ☐

Teacher: Great. Let us begin with the first question. Animals that live on _____ are called terrestrial animals. Think carefully and fill in the blanks given in the statement. (Similarly complete all five questions.)

C Write short answers in your notebook.

1. What are aquatic animals? Give an example.
2. Keerat is observing an animal from his window. He observes that this animal has fur on its body, four legs and a furry tail. It runs to the garden from the trees, picks up the bits of bread or fruits and runs back to the trees and nibbles them. Which animal is he observing?
3. Define aestivation.

51

Teacher: Now, let us explore some short-answer questions. In Exercise 'C' of the 'Learning better' section, you have to write short answer. Are you ready to get started?

MUST DO 10 MIN. ☐

Teacher: Great. Let us begin with the first question. What are aquatic animals? Give an example.

(Students have to write the answers for the given questions in about 40 to 50 words in their notebook. Wait for the students to write the answers.)

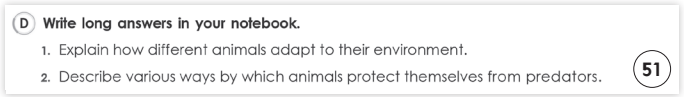
(Similarly complete all three questions)

Teacher: Great. Let us explore some long-answer questions. Let us begin with the first question. Explain how different animals adapt to their environment.

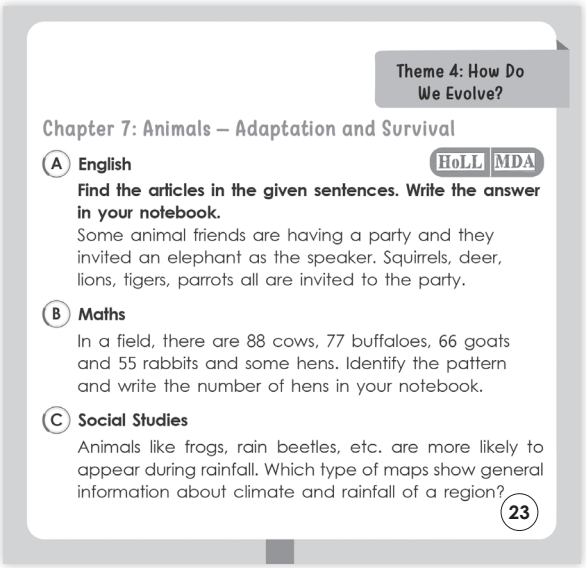
(Students have to write the answers for the given questions in about 100 to 150 words in their notebook. Wait for the students to write the answers.)

MUST DO 10 MIN. ☐

(Similarly, complete the second question.)


D Write long answers in your notebook.
1. Explain how different animals adapt to their environment.
2. Describe various ways by which animals protect themselves from predators.
51

Book of Holistic Teaching


Theme 4: How Do We Evolve?

Chapter 7: Animals – Adaptation and Survival

A English HoLL MDA

Find the articles in the given sentences. Write the answer in your notebook.

Some animal friends are having a party and they invited an elephant as the speaker. Squirrels, deer, lions, tigers, parrots all are invited to the party.

B Maths

In a field, there are 88 cows, 77 buffaloes, 66 goats and 55 rabbits and some hens. Identify the pattern and write the number of hens in your notebook.

C Social Studies

Animals like frogs, rain beetles, etc. are more likely to appear during rainfall. Which type of maps show general information about climate and rainfall of a region?

23

COULD DO

10 MIN.

Refer to the Book of Holistic Teaching, page number 24 under the title 'Animals – Adaptation and Survival.' Complete the activities mentioned in this section and ensure that the students complete them. These activities are designed to enhance their holistic understanding and engagement with the topic. Provide any necessary support and materials to help the students successfully finish the activities.

You may show the **Quiz** on the digital platform.

Differentiated Activities

110 km/hr

Which adaptation helps animals survive in extremely cold conditions?

80 km/hr

Name an animal that can live both on land and in water.

40 km/hr

What do we call animals that live in water?

Home Task

The Project Idea, given in the book of Project Ideas, page number 18 under the title 'Animals – Adaptation and Survival.' This project should be assigned to the students as a home task to work on. Ensure that the students understand the project requirements and provide any necessary guidance or materials they might need.

Period 11

SHOULD DO

5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Wonderful. Before we begin today's lesson, let us play a quick guessing game based on everything we have learned so far. I will describe an adaptation, and you have to tell me the name of the animal that has it. Let us begin.

Teacher: I can store water in my body and survive in the desert without drinking for many days. Who am I? (Camel)

Teacher: I have sharp claws and excellent eyesight to help me hunt my prey from the sky. Who am I? (Eagle)

Teacher: I live in water and have gills to breathe underwater. Who am I? (Fish)

Teacher: I can survive the freezing cold because my thick fur keeps me warm. Who am I? (Polar Bear)

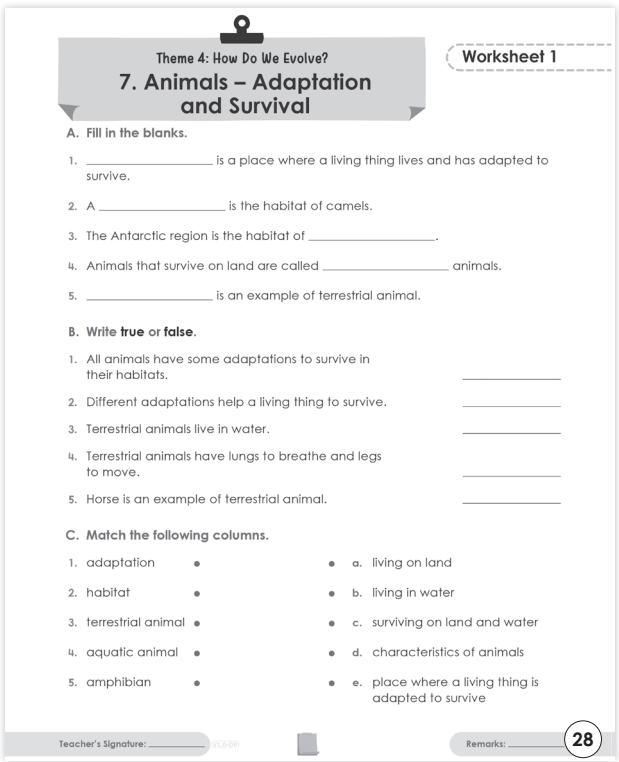
Teacher: I am a tiny creature that sucks blood from animals and sometimes humans. Who am I? (Leech)

MUST DO

15 MIN.

Teacher: Excellent answers. You all remember animal adaptations very well. Now, let us begin today's lesson.

Worksheet – 1


Theme 4: How Do We Evolve?

Worksheet 1

7. Animals – Adaptation and Survival

A. Fill in the blanks.

1. _____ is a place where a living thing lives and has adapted to survive.
2. A _____ is the habitat of camels.
3. The Antarctic region is the habitat of _____.
4. Animals that survive on land are called _____ animals.
5. _____ is an example of terrestrial animal.

B. Write true or false.

1. All animals have some adaptations to survive in their habitats. _____
2. Different adaptations help a living thing to survive. _____
3. Terrestrial animals live in water. _____
4. Terrestrial animals have lungs to breathe and legs to move. _____
5. Horse is an example of terrestrial animal. _____

C. Match the following columns.

1. adaptation •	• a. living on land
2. habitat •	• b. living in water
3. terrestrial animal •	• c. surviving on land and water
4. aquatic animal •	• d. characteristics of animals
5. amphibian •	• e. place where a living thing is adapted to survive

Teacher's Signature: _____ Remarks: _____

28

Teacher: Let us do the activities from the workbook. Everybody, please open page 28 of your workbook and answer the questions given in worksheet -1.

(Let the students answer the questions on their own. Then discuss the answer by writing the correct answer on the blackboard.)

Worksheet – 2

Worksheet 2

A. Answer the following.

1. What are adaptations?
2. What is a habitat?
3. What are terrestrial animals?
4. How do terrestrial animals detect changes in the surroundings?
5. What are aquatic animals?

B. Give two examples of each.

1. terrestrial animals
2. aquatic animals
3. amphibians
4. aerial animals
5. arboreal animals

C. Write Y for yes and N for no.

1. Aquatic animals survive on land.
2. Crabs have fins to help them swim.
3. Fishes have lungs to breathe under water.
4. Amphibians can survive both on land and in water.
5. Amphibians have lungs as well as limbs.

Teacher's Signature: _____ Remarks: _____ 29

Teacher: Let us do the activities from the workbook. Everybody, please open page 29 of your workbook and answer the questions given in worksheet-2.

MUST DO
15 MIN.

(Let the students answer the questions on their own. Then discuss the answer by writing the correct answer on the blackboard.)

You may generate additional practice worksheets using the **Test Generator** given on digital platform.

Teacher: Let us play a quick and exciting relay game to recall what we have learned about animal adaptations. I will divide the class into two teams. Each team will take turns answering questions about adaptations. When I call out an adaptation, one team member must quickly name an animal that has that adaptation. If correct, they pass the turn to the next teammate. The team that gives the most correct answers wins. Let us begin.

COULD DO
5 MIN.

Teacher: This adaptation allows animals to blend into their surroundings to avoid predators. (Camouflage – Chameleon)

Teacher: These animals sleep through winter to survive harsh cold. (Hibernation – Bear)

Teacher: These animals have thick fur to keep warm in extremely cold regions. (Polar Bear, Arctic Fox)

Teacher: This is the only flying mammal. (Bat)

Teacher: These animals spend most of their time on trees. (Arboreal Animals – Monkey, Squirrel)

Teacher: These animals use venom to protect themselves. (Snake, Scorpion)

Teacher: These animals have sharp, pointed teeth to tear meat. (Carnivores – Lion, Tiger)

Teacher: These animals can live both in water and on land. (Amphibians – Frog, Salamander)

Teacher: Well done, everyone. This game helped us revise different adaptations and how animals survive in their environments. Now, let us move on to the next part of our lesson.

Differentiated Activities

110 km/hr

Which adaptation helps animals survive in extremely cold conditions?

80 km/hr

Name an animal that can live both on land and in water.

40 km/hr

What do we call animals that live in water?

Home Task

Complete Worksheet 3, at home, given on page 29 of your workbook.

Period 12

SHOULD DO
5 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Today, we will play a quick game called Survival Scenario to recall what we have learned about animal adaptations. I will describe a situation and you have to decide which adaptation would help an animal survive in that condition. Let us begin.

Teacher: An animal lives in the cold Arctic region. How does it stay warm? (Thick fur/blubber)

Teacher: A fish needs to breathe underwater. What adaptation helps it? (Gills)

Teacher: A chameleon is hiding from a predator. What adaptation does it use? (Camouflage)

Teacher: A frog lives in a desert where water is scarce. What does it do during extreme heat? (Aestivation)

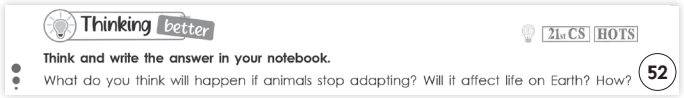
Teacher: An eagle spots its prey from a great distance. What adaptation helps it? (Sharp eyesight)

Teacher: Fantastic answers. You all remembered how animals adapt to survive in different environments. Now, let us begin today's lesson.

MUST DO
10 MIN.

(Discuss the project assigned in the tenth period, focusing on helping students understand the objectives and addressing any challenges they faced.)

Thinking better

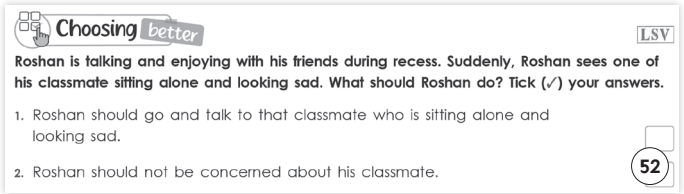


Teacher: Let us begin with a question to make you think. I will ask questions and you have to answer them in your notebook.

MUST DO
10 MIN.

Teacher: Now, think about this—what will happen if animals stop adapting? How do you think this would affect life on Earth? Think properly and write your answer in your notebook.
(Give students to think and write their answers in their notebooks.)
Teacher: That is right. Without adaptation, animals will struggle to survive in their environment. If animals cannot survive, ecosystems will become unbalanced.

Choosing Better

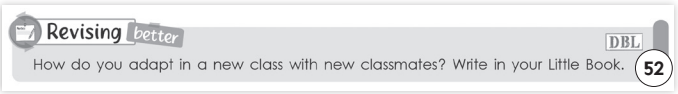


Teacher: Turn to the section Choosing Better and read about Roshan's situation during recess.
(Give students time to read.)

MUST DO
5 MIN.

Teacher: Imagine you are Roshan. You see a classmate sitting alone and looking sad while everyone else is having fun. What would you do?
Teacher: That is right. It is always kind to talk to someone who looks sad or lonely. Why do you think this is important?
Teacher: Yes. Showing empathy and kindness makes everyone feel included and happy. What do you think Roshan should do in this situation?

Revising Better



Teacher: Look at the last section Revising Better and think about the question given there.
(Give students time to reflect.)

MUST DO
5 MIN.

Teacher: How do you adapt to a new class with new classmates?
Teacher: Good. Making new friends, talking to others and understanding how the class works are all ways of adapting. Why is it important to adjust to new situations?
Teacher: Exactly. Adapting helps us feel comfortable and learn better in any environment. Now, let us move to an activity.
Teacher: Now, let us complete the 'KWL' activity.
Teacher: Take out your notebook and fill in the last column. Write what have you learned in this chapter.
(Wait for students to fill in the chart.)
Teacher: Let us all give a huge round of applause to everyone for their hard work and creativity. Great job, everyone. See you in the next class. Have a wonderful day ahead.

SHOULD DO
5 MIN.

Differentiated Activities

110 km/hr

Why do some animals migrate to different places during certain seasons?

80 km/hr

Name one animal that uses mimicry to protect itself from predators.

40 km/hr

What is the term for animals that sleep during winter to survive the cold?

Home Task

Activity 2, (Make a Paper Roll Snake), given on page 53 of the Main Course Book.

Learning Outcomes

The students will:

Physical Development	• engage in kinaesthetic activities such as drawing, crafting a polar bear's habitat, and making a paper roll snake, helping develop fine motor skills.
Socio-Emotional and Ethical Development	• understand the importance of conservation and empathise with animals and their adaptations for survival. They will also reflect on social behaviour through decision-making activities, such as Roshan's scenario.
Cognitive Development	• identify and classify animals based on their habitats, adaptations, and food habits. They will understand survival mechanisms like hibernation, camouflage, and mimicry.
Language and Literacy Development	• improve comprehension by reading and answering questions on animal adaptations. They will engage in discussions, writing reflections in their Little Book, and responding to prompts.
Aesthetic and Cultural Development	• explore creativity by designing a habitat for a polar bear and constructing a paper roll snake, encouraging appreciation for nature and wildlife conservation.
Positive Learning Habits	• develop curiosity and observation skills by thinking critically about the impact of adaptation on survival and life on Earth. They will engage in reflective learning through revising and interacting activities.

Starry Knights

Could you manage the class discipline during skit with animal puppets? How was the learners' reaction to the puppets they had made?

Reward yourself with a STAR.